REPORT RESUMES

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THE NEBRASKA STUDY OF THE SYNTAX OF CHILDREN'S WRITING, 1964-65, VOLUME I.

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NEBRASKA UNIV., LINCOLN, CURRICULUM DEV. CTR.

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THE NEBRASKA CURRICULUM DEVELOPMENT CENTER'S STUDY OF THE SYNTAX OF CHILDREN'S WRITING ATTEMPTED TO ASCERTAIN (1) THE PROGRESSIVE NUMBER OF SENTENCE UNITS WRITTEN BY STUDENTS IN GRADES TWO THROUGH SIX, (2) LEVELS OF STRUCTURAL COMPLEXITY IN CHILDREN'S WRITING, (3) SYNTACTIC PATTERNS OF THIS COMMUNICATION, (4) WHETHER OR NOT COMMON CHARACTERISTICS OF SYNTACTIC PATTERNS COULD BE IDENTIFIED AND CLASSIFIED, AND (5) WHETHER OR NOT ANY OF THE ELEMENTS PROVIDING VARIETY IN SENTENCE STRUCTURE COULD BE IDENTIFIED AND DESCRIBED. DETAILED ANALYSIS WAS MADE OF 20 PERCENT OF ALL SENTENCES PRODUCED IN THE 1000 COMPOSITIONS WRITTEN FOR THE STUDY. "AN INSTRUMENT FOR THE SYNTACTIC ANALYSIS OF CHILDREN'S COMPOSITION," THE LIST OF GUIDELINES AND EXAMPLES DEVELOPED AND UTILIZED DURING THE STUDY, PROVED VALUABLE FOR SUCH ANALYSIS. LIMITING FACTORS IN THE PROJECT WERE THOSE INHERENT IN THE VALIDITY AND RELIABILITY OF THE TESTS EMPLOYED, THE GEOGRAPHIC SPECIFICITY OF THE SAMPLE TESTED, AND THE UNCONTROLLED VARIABLES OF PHYSICAL HEALTH, VISUAL AND AUDITORY LIMITATIONS, AND POOR EMOTIONAL ADJUSTMENT, IN ADDITION TO BUILDING FACILITIES, TIME OF DAY, AND DIFFERING TECHNIQUES OF INVESTIGATORS. THE STUDY REVEALED THAT (1) ELEMENTARY STUDENTS WROTE FEWER SENTENCE UNITS THAN DID INTERMEDIATES, (2) THE RATE OF SENTENCE UNIT INCREASE SLACKENED AT THE UPPER INTERMEDIATE LEVEL, BUT PATTERN COMPLEXITY INCREASED, (3) STUDENTS USED 12 BASIC SENTENCE PATTERNS, (4) DIFFERENT SECTIONS OF ONE GRADE DID NOT ALWAYS PRODUCE SIMILARLY CONSTRUCTED SENTENCES, AND (5) ALL STUDENTS EMPLOYED SEVERAL SENTENCE PATTERNS, BUT OLDER STUDENTS USED INVERTED FORMS IGNORED BY SECOND- AND THIRD-GRADERS. (A COPY OF THE ANALYTIC INSTRUMENT IS APPENDED TO THE REPORT.) (RD)

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VOLUME I

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July 1967

The University of Nebraska
Nebraska Curriculum Development Center

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This study was made possible by a grant from the Louis W. and Maud Hill Family Foundation of St. Paul, Minnesota.

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VOLUME I

THE NEBRASKA STUDY
OF THE SYNTAX OF CHILDREN"S WRITING, 1964-65

Director: Eldonna Evertts
Assistant Director: Nell Thompson
Linguistic Analysts: Vance Hansen
Donald Nemanich

ACKNOWLEDGMENT

Credit for this study belongs to many persons: Eldonna Evertts, who assumed major responsibility for the portion of the study reported in Volume I; the project team; personnel of the Nebraska Curriculum Development Center; linguists; statisticians; and especially, to the many teachers and Administrators of the Lincoln and Omaha Public Schools who made this research possible.

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CHAPTER I: BACKGROUND OF THE STUDY

I. PERSONNEL AND FUNDING

The Nebraska Syntax Study came into existence because there is a need to know more than we now do about how children learn to write. The research described in Volume I was conducted by the following project team:

Eldonna Evertts, Director
Nell Thompson, Assistant Director
Vance Hansen, Linguistic Analyst
Donald Nemanich, Linguistic Analyst

The Study was supported by the Hill Family Foundation of Minneapolis, Minnesota, and sponsored by the Nebraska Curriculum Development Center of the University of Nebraska.

II. RELATED RESEARCH

On the national level, quality research related to composition at the elementary level is sadly lacking, although many investigators have given special attention to composition at the high school and college levels. For instance, the Source Book on English Institutes for Elementary Teachers,[1] a book designed to help English or elementary education departments in preparing proposals for the NDEA summer institutes, presents thoughtfully prepared articles utilizing the investigations of distinguished scholars. The content of the book--which may be regarded as summarizing what is known about the teaching of language, literature and composition to children--suggests that there is very little first-class research bearing on composition in the elementary school; this may not be surprising since

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[1] Source Book on English Institutes for Elementary Teachers, The National Council of Teachers of English, Champaign, Illinois, 1965.

Richard Braddock[2] and his associates report that little quality research has been done concerning composition generally. And both reports would appear to suggest that studies similar to that conducted by Robert Potter[3] and to those reported by Robert Hunting[4] need to be conducted with elementary school children.

Educators have long been interested in how the teaching of composition might be more successfully done: they have sought to know more about the composing process, about how certain linguistic competencies might be stimulated and developed through selected experiences and in selected writing situations; they have questioned steps in "learning to write" which have been identified; they have questioned whether linear or spiralling sequences promote better writing. Many persons have found help, when evaluating the child's use of the written language, in utilizing the methods and procedures of Dorothea McCarthy,[5] those developed in her well-organized and pioneering study of language conducted during the 1930's; others have found advantageous the use of measures of sentence length and complexity of grammatical construction employed by Mildred Templin in 1957 when she brought up-to-date her earlier language studies.[6] But the fact is that we no more know how to evaluate children's growth in composition skills than we know how to do "research" concerning composition. And not only is the scholar, researcher, or college teacher interested in the evaluation of a composition or theme; the elementary school teacher and the high school teacher of English are too.

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[2] Richard Braddock, Richard Lloyd-Jones, and Lowel Schoel, Research in Written Composition, The National Council of Teachers of English, Champaign, Illinois, 1965.

[3] Robert R. Potter, "Sentence Structure and Prose Quality: An Exploratory Study," Research in the Teaching of English, I (Spring, 1967), pp. 17-28.

[4] Robert Hunting, "Recent Studies of Writing Frequency," Research in the Teaching of English, I (Spring, 1967), pp. 29-40.

[5] Dorothea A. McCarthy, The Language Development of the Pre-School Child, Institute of Child Welfare, Monograph Series No. 4, University of Minnesota Press, Minneapolis, 1930.

[6] Mildred C. Templin, Certain Language Skills in Children: Their Development and Interrelationships, University of Minnesota Press, Minneapolis, 1957.

Recently the schemata of linguistics have been applied to the evaluating and describing of the child's handling of language. The results indicate that this approach may supply means whereby the child's handling of language can be studied objectively and meaningfully. Ruth Strickland[7] reporting in The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children and Walter Loban[8] reporting in The Language of Elementary School Children; Language Ability: Grades Seven, Eight, and Nine and in Problems in Oral English illustrate how it is possible to study the language of children objectively. Their studies are models for this one.

From the Strickland study, one can generalize that children at all grade levels use a wide range of language patterns in oral conversation. They can expand and elaborate their sentences through the use of movables and elements of subordination. Strickland's study indicates that additional study of children's sentence patterns might reveal points at which they need help to understand sentence structures: for instance, Strickland suggests that the number of long, run-on sentences used by many children are evidence that they need help both with cutting long units into shorter units and with converting some coordinate units into subordinate ones to clarify their meaning and perspective.

Again, Loban found that pupils who write well score high in oral language, listening, and reading tests; one of his key findings regarding pupils in the first seven years is that with each succeeding year pupils--given a specified frame for using language--speak more words, use more communication units, and increase the number of words per unit within the 'frame.' His study suggests that a child's effectiveness in handling language should be measured not by the language pattern which he uses but by his flexibility in handling the pattern; the pupil who is sensitive to conventions of language is also likely to be more proficient in its use.

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[7] Ruth G. Strickland, The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children, Bulletin of the School of Education, Indiana University, Bloomington, Indiana, 1962.

[8] Walter D. Loban, The Language of Elementary School Children, National Council of Teachers of English, Champaign, Illinois, 1963. Language Ability: Grades Seven, Eight, and Nine, Cooperative Research Project Number 1131, The University of California, Berkeley, California, 1964. Problems in Oral English, Champaign, Illinois: National Council of Teachers of English, 1966.

These studies which are the central studies of children's oral language using linguistic schemata have been complemented by some studies of children's composition which are allied in purpose, or in finding, to the study which follows. For instance, the positive effect of oral language experience upon quality of elementary compositions has been demonstrated by Alvina Burrows and others.[9] Mildred E. Riling[10] (using an analysis similar to that used in the Strickland study) in a study of Negro and Caucasian pupils at the fourth-grade and sixth-grade levels showed clearly that children, in handling the written language, can use structures which they can not use to any extent in handling the oral. Riling believes that this manifests an awareness on the part of children of the more complex thought processes which are called into play when one writes. Indeed, some children who lacked a variety as to command of linguistic structures in the earlier grades developed a bookishness and wordiness, especially within the subject and complement slots, by grade 6. Finally, Kellogg Hunt[11], Wallace Douglas[12], and others have focused upon the importance of linguistic understanding to the evaluating of the student's progress in composition; Hunt's study of children's progress in the mastery of syntax works with research problems very like those of this study. His findings complement but do not duplicate those of this study.

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[9] Alvina Burrows, et al., They All Want to Write, Englewood Cliffs, New Jersey, 1962.

[10] Mildred E. Riling, "Oral and Written Language of Children in Grades 4 and 6 Compared with the Language of Their Textbooks," Southeastern State College, Durant, Oklahoma, 1965. (Report to the U. S. Office of Education, Cooperative Research Project No. 2410).

III. GENESIS OF THE STUDY

The interest engendered in composition and its evaluation at the Nebraska Curriculum Development Center is the genesis of this study. The Curriculum Center has been instrumental, during the period from 1961 to the present, in developing an English program for grades K-to-13 encompassing literature, language, and composition. The program encouraged the teacher at the elementary level to read many stories, poems, and books to his pupils and to have them write compositions relating to these stories. The question then arose: How can the syntax of these students, their mastery of written syntax, be evaluated?

For the purpose of evaluation it was necessary to create an instrument capable of giving a description of written composition sensitive enough to discriminate between children's writing and literary writing. A series of conferences and meetings with linguists, psychologists, educators, statisticians, and others evaluated the instrument at various stages of its construction.

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[11] Kellogg W. Hunt, Differences in Grammatical Structures Written at Three Grade Levels, The Structures to be Analyzed by Transformational Methods, Cooperative Research Project Number 1998, Florida State University, Tallahassee, Florida, 1964.

[12] Wallace W. Douglas, "On Teaching the Process of Writing" and "The Place of Rhetoric in the Preparation of Composition Teachers," New Directions in Elementary English, Champaign, Illinois, 1965.

The purpose of AN INSTRUMENT FOR THE SYNTACTIC ANALYSIS OF CHILDREN'S COMPOSITIONS (Revised June 15, 1965) was to provide a method whereby the written sentence structures of individuals and groups of individuals can be described. The INSTRUMENT was adapted from the one devised for the Strickland study.[14] The nature of the fixed and movable elements, however, and the analysis of the various levels other than Level I are considerably different.

The INSTRUMENT[15] is concerned with syntax, therefore it is imperative that the sentence, as the syntactical unit, be clearly defined. Many pupils have not mastered the conventions of punctuation; as a result it was necessary to design a uniform system for determining the length of the unit. Whenever possible, their punctuation is used. Each independent clause is considered a separate communication unit; each subordinate clause is joined to a closely related independent clause. Compound sentences are regarded as one or more communication units.

The terms "sentence," "syntactic unit," and "communication unit" are used synonymously in this study. These units are analyzed according to the levels of structure which they contain. The Level I analysis is the description and identification of fixed slots and movable elements which serve as complete subjects, verbs, objects, complements, and other fixed and movable structures. Level II is a description and identification of the individual grammatical items which serve as fillers in sentence-level slots whenever a slot of Level I consists of more than a single element. It is necessary to have more than two levels of analysis when syntactic structures consisting of phrases and clauses are nested within one another. These additional levels are identified as Levels III, IV, etc. When coding the structural pattern of Level II or higher levels within structures of predication or structures of complementation, the Level I notational devices or symbols which are appropriate were used and, when needed, additional symbols are included.

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[14] Strickland, op. cit.

[15] A copy of the INSTRUMENT appears as an appendix to this segment of the study.

The syntactic segments of a communication unit which are not identified, in general, as question words, subjects, verbs, or objects are called movables and fixed elements. Movables are defined as those syntactic segments which do not fit into the subject slot, verb slot, or any of the object slots and when compared with these slots, have greater degrees of freedom of order and placement and so may be described as freely "movable." By contrast, fixed elements are defined as those syntactic segments outside the subject slot, verb slot, or any of the object slots which are relatively "fixed" or are not easily "movable." The placement of fixed syntactic segments within the sentence appears to be obligatory. The fixed segments may precede the subject of the sentence, precede the verb, follow the verb, or follow an object or complement. Thus the classification of both movables and fixed elements is based upon their position in the sentence rather than upon semantics.

With the development of an INSTRUMENT which was both reliable and appropriate for use with children's compositions, the next step was to proceed with the research project.

IV. PURPOSE OF THE INVESTIGATION

This study, concerned with a description of children's written syntax, proposed to investigate the written communication of pupils in the second through the sixth grades in city public schools. The description of written communication was based upon the compositions produced by groups of children who could be described according to the variables of education and occupational status of parents, chronological age, mental age, verbal intelligence, non-verbal intelligence, total intelligence, reading vocabulary, reading comprehension, total reading, mechanical skills in language, spelling, total language ability, and sex.

Some specific questions this study attempted to answer were:

1. What are the trends in the number of syntactic units written in the elementary school, grades 2-6?
2. What levels of complexity of structure do children use in their writing?
3. What syntactic patterns appear in the written communication of children?
4. Can the common characteristics of the syntactic patterns used by children be identified and classified?
5. Can any of the elements of written communication providing variety in sentence structure be identified and described?

V. LIMITATIONS

The value of this study was limited by a number of factors for which no control was attempted. These include the personal factors of physical health, visual or auditory limitations, or poor emotional adjustment of the pupils, the physical facilities of the building, the time of day, and the techniques of the different investigators.

Various tests and measurement instruments were selected to measure specific variables for this study. The findings of this study are restricted by the validity and reliability of these tests.

The findings and conclusions presented in this study cannot be generalized beyond the specific sample on which they are based.

VI. DELIMITATIONS

A number of delimitations are apparent in this study. The sample was limited to an area of the Great Plains which may not be representative of the United States as a whole. It was limited to 600 cases, selected by random sample, from the second through the sixth grades of seven elementary schools in Lincoln and Omaha, Nebraska, during the 1963-1964 and 1964-1965 school years. Although these schools may not be representative of American school systems as a whole, they were selected because of the wide range of educational background of parents and intellectual differences among the children. These schools also had well-developed language arts programs and easy accessibility for the conducting of the study. No attempt was made to equate groups before the selection of the sample except on the basis of sex.

The stories written by the children in this study were divided into sentences, communication units--syntactic units based upon the child's punctuation when possible. however, compound sentences were divided into two or more communication units for analysis. The analysis of writing was based upon the INSTRUMENT designed for this study. The number of sentences selected for analysis and the techniques for computer data processing were designed for the larger study at the University of Nebraska, of which this study is one segment.

Vocabulary, usage and sentence length were not considered. Likewise the correlation of pupils' background data with patterns of structure, the language arts content, and teaching procedures in the participating schools were not measured in this portion of the study although the background data showed that the ten groups were equivalent.

VII. BASIC ASSUMPTIONS

One of the basic assumptions of this study was that a single story written during the first year of the study and another story written during the second year would provide an adequate source of data for an analysis of structural patterns. It was further assumed that the writing situation would encourage the production of many communication units and a wide range of syntactic patterns, that units written during the writing sessions were typical of the units or sentences produced by these pupils in grades 2 to 6, and that written communication units are clearly identifiable and analyzable segments. It was believed that a selection of 20% of all the communication units produced would provide an adequate range of the pupils' written syntactical patterns. A further assumption was that a meaningful linguistic analysis could be made of children's written compositions.

CHAPTER II: DESIGN OF THE STUDY

I. THE PUPILS

The first stage of this study, loosely constructed, permitted the exploration of children's writing and was designed to isolate and identify the structures which children at grades 2-6 use in their written sentences or communication units. The study at this point allowed for the investigation of the levels of structure used by children and the syntactic patterns found within these levels. It described the syntactic structures, not of individuals, but of groups.

A total of 600 pupils was selected at random from seven elementary schools in Lincoln and Omaha, Nebraska, during the 1963-1964 and 1964-1965 academic years. The Lincoln schools were Calvert, Holmes, and Huntington; the Omaha schools: Adams, Belle Ryan, Harrison, and Mt. View. These school systems were selected because of their accessibility, the wide variance of cultural and academic background of the pupils, the types of language arts programs offered, and the fine cooperation of the school staffs and administrators. No attempt was made to equate schools, teaching methods, or the socio-economic level of the school community. The pupils in the sample were selected from the entire pupil population and divided into two groups according to sex. An equal number of boys and girls was maintained at each grade level. These pupils, selected by random number[1] represented Negro and white children from English-speaking homes. They were selected because no atypical situations or problems seemed to exist in their schools.

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[1] George W. Snedecor, Statistical Methods, The Iowa State College Press, Ames, Iowa, 1946.

Five hundred pupils were selected for the first year of the study. Four hundred of these continued through the second year. The sixth-grade class which moved to the seventh grade was in the study only the first year. A new second grade entered the study in the second year. Throughout the study the symbols 21, 31, 41, 51, and 61 refer to the second, third, fourth, fifth, and sixth grades during the first year and 22, 32, 42, 52, and 62 refer to these grades during the second year of the study. The pupils of 21, 31, 41, and 51 became the 32, 42, 52, and 62 pupils. The following diagram shows the relationship of the groups from one year to the next.

$$\begin{tikzcd} \text{First year, 1963-64} & 21 \arrow[dr] & 31 \arrow[dr] & 41 \arrow[dr] & 51 \arrow[dr] & 61 \\ \text{Second year, 1964-65} & 22 & 32 & 42 & 52 & 62 \end{tikzcd}$$

Cards requesting background information were sent to parents to determine parental occupations and the highest educational level attained by both mothers and fathers. These data were transferred to permanent background cards, together with information secured from the permanent records in the school offices and the test results obtained for the present study. Conferences explaining the research study had been held with the assistant superintendents in charge of curriculum and their staffs. The cooperation of administrators and the teachers made it possible to secure all the necessary background data for the pupils in the sample. Background-card information included chronological age, sex, intelligence, mental age, occupational status of parents, educational background of parents, and test scores.

The chronological ages of the pupils in the sample ranged from the 72-83 month interval in second grade to the 168-179 month interval in the fifth grade. The range of chronological ages for the sample population is seen in Table 1. The pupils in the 51 group represent pupils older than those in the other groups although the mean is 133.3 months compared with the mean of 135.9 months for the

Table 1 DISTRIBUTION OF SAMPLE POPULATION ACCORDING TO CHRONOLOGICAL AGE

Chronological Age in Months	Grade Levels						Total N=600
	21	22	31	41	51	61	
72 - 83	0	3	0	0	0	0	3
84 - 95	51	58	0	0	0	0	109
96 - 107	42	37	51	0	0	0	130
108 - 119	6	2	44	59	0	1	112
120 - 131	1		5	39	60	25	130
132 - 143				2	27	64	93
144 - 155					3	8	11
156 - 167					7	2	9
168 - 179					3		3

61 group as shown in Table 2. This table also gives the mean and standard deviations for mental ages of the sample population.

Before the samples of written compositions were collected a number of tests, including the California Short-Form Test of Mental Maturity, were administered. These were given to all pupils by the investigator and associates. In Table 3 the mean and standard deviations for verbal, non-verbal and total intelligence for the sample population are shown. The lowest mean intelligence quotient was 102.7 for the 31 group on non-verbal intelligence; the highest was a mean intelligence quotient of 120.2 for the 41 group on verbal intelligence. All of the group means were more than 100.

The California Reading Test, Lower and Upper Primary and Elementary Levels, was used to obtain scores for vocabulary, comprehension, and total reading ability. A description of the sample according to means for vocabulary, comprehension, and total reading is illustrated by Table 4. The means for each group show that the pupils were reading at grade level or were above grade level.

The pupils in this study were performing at grade level or above in language usage, spelling, and total language ability as measured by the California Language Test, Lower and Upper Primary and Elementary Levels. Table 5 shows that the usage, spelling, and total language means for pupils in the intermediate grades were about one year above grade placement. Pupils in the second grade were achieving at grade level.

The educational background of the parents was stratified according to an arbitrary seven-point scale. The background information submitted by parents made it possible to classify educational attainment on this scale. A description of the distribution of the pupils according to the educational background of fathers is presented in Table 6. In Table 7 the distribution according to the educational background of mothers is presented. The means for both fathers and

Table 2

MEAN AND STANDARD DEVIATION SCORES FOR CHRONOLOGICAL AND MENTAL AGES OF PUPILS IN GRADES 2-6

Age	Grade Levels					
	21	22	31	41	51	61
Chronological						
Mean in months	96.0	93.7	107.6	118.6	133.3	135.9
Standard Deviation	6.1	5.4	5.8	4.9	11.7	6.7
Mental						
Mean in months	108.0	106.5	116.4	138.4	151.1	155.3
Standard Deviation	12.8	11.8	10.9	14.9	22.5	21.0

Table 3 VERBAL, NON-VERBAL, AND TOTAL INTELLIGENCE QUOTIENTS OF THE SAMPLE POPULATION ACCORDING TO MEAN AND STANDARD DEVIATION

Intelligence Quotient	Grade Levels						Total Population
	21	22	31	41	51	61	
Verbal Intelligence Quotient							
Mean	116.2	116.4	113.7	120.2	116.5	118.47	116.9
Standard Deviation	18.7	14.8	13.1	15.2	15.3	18.0	16.1
Non-Verbal Intelligence Quotient							
Mean	110.0	111.0	102.7	113.0	110.6	111.5	109.8
Standard Deviation	16.8	16.5	12.9	17.7	16.1	21.8	17.5
Total Intelligence Quotient							
Mean	113.3	113.9	108.3	117.0	113.8	115.1	113.6
Standard Deviation	15.22	13.2	10.6	13.1	13.1	18.4	14.4

Table 4

VOCABULARY, COMPREHENSION, AND TOTAL READING MEANS ACCORDING TO GRADE LEVELS 2-6

Grade Level	Mean		
	Vocabulary	Comprehension	Total Reading
21	2.6	2.7	2.7
22	2.6	2.7	2.7
31	4.2	4.0	4.1
41	5.8	5.7	5.8
51	6.7	6.5	6.6
61	7.1	7.2	7.2

Table 5

USAGE, SPELLING, AND TOTAL LANGUAGE MEANS
ACCORDING TO GRADE LEVELS 2-6

Grade Level	Mean		
	Mechanics	Spelling	Total
21	2.4	2.8	2.6
22	2.5	2.7	2.6
31	3.8	3.6	3.7
41	5.7	5.6	5.5
51	6.5	6.7	6.6
61	7.1	7.2	7.1

Table 6 DISTRIBUTION OF SAMPLE ACCORDING TO EDUCATIONAL BACKGROUND OF FATHERS

Educational Background	Grade Levels 21	22	31	41	51	61	Total M=3.7
1. Attended elementary school	4	5	6	3	7	7	32
2. Attended high school	10	9	14	8	6	14	61
3. Completed high school	38	45	35	27	36	30	211
4. Attended college	26	17	30	25	19	23	140
5. Completed college	11	15	6	19	20	14	85
6. Attended graduate school	7	2	5	9	8	6	37
7. Attained 18 or more years of education	4	7	4	9	4	6	34

Table 7 DISTRIBUTION OF SAMPLE ACCORDING TO EDUCATIONAL BACKGROUND OF MOTHERS

Educational Background	Grade Levels						Total
	21	22	31	41	51	61	M=3.4
1. Attended elementary school	1	4	2	2	3	4	16
2. Attended high school	10	9	13	3	9	17	61
3. Completed high school	50	49	49	47	49	43	287
4. Attended college	25	19	26	29	27	23	149
5. Completed college	13	15	10	17	10	12	77
6. Attended graduate school	1	4		2	2	1	10
7. Attained 18 or more years of education							

Table 8

DISTRIBUTION OF OCCUPATIONAL STATUS OF PARENTS OF SUBJECTS

Occupational Classifications	Grade Levels						Total
	21	22	31	41	51	61	
I. Professional	9	8	5	12	13	9	56
II. Semi-professional and managerial	21	19	13	24	19	20	116
III. Clerical, skilled trades, retail business	38	26	36	42	38	34	214
IV. Farmers	0	0	0	0	0	0	0
V. Semi-skilled occupations, minor clerical positions, and minor business	27	38	39	22	22	29	177
VI. Slightly skilled trades	3	7	4	0	4	7	25
VII. Day laborers	2	2	3	0	4	1	12

Table 9 PERCENTAGE DISTRIBUTION OF OCCUPATIONAL STATUS OF PARENTS OF SUBJECTS

Occupational Classification	Percentage	
	In 1940 Census*	Present Study
I. Professional	2.7	9.3
II. Semi-professional and managerial	7.2	19.3
III. Clerical, skilled trades, retail business	14.1	35.6
IV. Farmers	15.3	**
V. Semi-skilled occupations, minor clerical positions, and minor business	23.8	29.5
VI. Slightly skilled trades	14.6	4.1
VII. Day laborers	22.3	0.2

* Most recent figures suitable for comparison
** None were included in this study

mothers of the total sample indicate that both parents completed high school and that a considerable number had attended college.

To determine the socio-economic level represented by the pupils in this study, the Minnesota Scale for Paternal Occupations[2] was selected. The scale furnishes a method of forming a stratified sample. The seven classifications of this scale and the frequency of occurrence for each in Table 8 illustrate the occupational status of the parents of subjects. Because there were no cases in category IV (farmers), the other categories would have a greater frequency. The largest number of cases were in categories III, V, and II. The lowest frequencies of cases were in VII and VI. Table 9 shows the percentage distribution of occupational status of the parents of the subjects in this study compared with the 1940 census, the most recent figures suitable for comparison. All percentages in this study would be expected to be greater than the 1940 census figures, yet percentages for classifications VI and VII are lower. As a whole the sample can be regarded as skewed toward the upper socio-economic level, based on parental occupation.

II. THE LANGUAGE SAMPLE

The language samples collected for this study were obtained during the academic years 1963-64 and 1964-65 in the public schools of Lincoln and Omaha, Nebraska. Ten groups were involved, five each year. There were 100 pupils, 50 boys and 50 girls, in each group, making a total of 600 different pupils. These pupils during the two years wrote 1000 compositions. Each of the pupils selected for this study was shown a motion picture. The first year "Hunter in the Forest" was shown; the second, "Adventures of a Baby Fox." The first film contains no words, the story being told through action and music; the second had few words but told a story in rhyme. The films were shown under varying circumstances in the different schools: multi-purpose rooms, classrooms, auditoriums, audio-visual rooms, and other areas which were available to the investigator. Few preliminary instructions were given. The pupils were told they would write a composition after viewing the film. It was explained that the writing need not be confined to the film but could be about anything that the pupils wished to write. When the pupils started to write, they were told spelling, handwriting, title and format would not be evaluated. They were further informed that the compositions were to be used for research purposes and would not be considered a part of their regular school work.

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[2] University of Minnesota, Institute of Child Welfare, The Minnesota Scale for Paternal Occupations.

The one thousand compositions written during the two years of the study were coded according to the year of the study, the group of which the pupil was a member, and the pupil's individual identification number. The compositions were typed verbatim on 8½" x 11" sheets of paper with about an inch of blank space between lines. Compositions were divided into communication units as defined in the INSTRUMENT. The placing of a caret (^) between communication or syntactic units permitted the sequential numbering of all units produced by each pupil. The communication units or sentences were numbered consecutively for each group. Sentences for detailed analysis were selected at random and comprised 20 per cent of all communication units produced by the pupils. The selected sentences were analyzed according to the system designed for this study. See Appendix A for the INSTRUMENT.

Colored pencils were used in the analysis, a different color for each level. Each level was thus distinct, and embedded constructions were easily represented. The data for all levels were transferred to fortran sheets for computer processing.

The method of analysis applied to the pupils' sentences can be illustrated by analyzing two selections written by pupils in the second and the sixth grades. These stories were selected because they are brief and could be easily reproduced. The stories and analyses appear in Appendix B.

CHAPTER III

RESULTS OF THE STUDY

Each year after viewing a film the sample pupils, in all grades (2-6) involved in this study, were asked to write a story. The pupils were permitted to write about the film or any other story which they wished to tell. No time limit was placed upon the writing situations; the pupils knew that spelling would not be a factor. No guidance or specific directions were given at any time prior to or during the writing.

I. SELECTION OF SYNTACTICAL UNITS

The range of the total number of syntactic units produced by the 100 subjects in each subgroup and analyzed in this study is shown in Table 10. The number of syntactic units ranged from 725 and 746 for the two subgroups in the second grade to 2,127 and 2,294 for the sixth grade. A total of 15,673 units was written during the two years this study was conducted. This table also shows the number of random units selected for detailed analysis. These constitute the source of data for this research report. For example, since it was arbitrarily decided that 20 per cent of the total syntactic units written each year should be analyzed according to the INSTRUMENT, 145 units were analyzed for the second grade class in the first year of the study and 149 for the second year of the study. Likewise 425 and 459 units were analyzed at grade six.

Table 11 shows the average number of syntactic units analyzed at each grade level for the two years of the study. The average number of syntactic units analyzed per grade increased from grade 2 to grade 6. There was an average of 147 units for grade two; 228 for grade three; 333 for grade four; 417 for

Table 10

NUMBER OF SNYTACTIC UNITS WRITTEN AND NUMBER ANALYZED FOR THE 100 CASES AT EACH GRADE LEVEL FOR THE TWO YEARS OF THE STUDY

Grade N = 100 pupils at each grade for each year	Total number of sentences written by 100 pupils each year of study	Number of sentences selected at random for detailed analysis. (20% of total sentences)
21	725	145
22	746	149
31	1,237	247
32	1,045	209
41	1,652	330
42	1,677	335
51	2,281	456
52	1,889	378
61	2,127	425
62	2,294	459
Total	15,673	3,133

Table 11 AVERAGE NUMBER OF SYNTACTIC UNITS ANALYZED AT EACH GRADE LEVEL FOR BOTH YEARS OF THE STUDY

Grade Two			
	21		145
	22		149
		Average	147
Grade Three			
	31		247
	32		209
		Average	228
Grade Four			
	41		330
	42		335
		Average	333
Grade Five			
	51		456
	52		378
		Average	417
Grade Six			
	61		425
	62		459
		Average	442

grade five; and 442 for grade six. This increase in units written shows that pupils wrote longer stories and more units each succeeding year spent in school. A total of 3,133 sentences were analyzed to determine the syntactical structures which elementary pupils in grades 2-6 can produce in written composition.

Since this study involved selected groups on a longitudinal basis, it was possible to compare the number of sentences written by the same group of individuals on two separate occasions a year apart. The same group of pupils are to be found in 21 and 32, 31 and 42, 41 and 52, and 51 and 62, respectively. Thus four groups were kept intact during the study. Table 12 presents a comparison of the number of syntactic units written both years by the same groups of subjects. There was group increase of 320 units between 21 and 32; 440 between 31 and 42; 237 between 41 and 52, and 13 between 51 and 62. This represents an increase of 30.6% for the same pupils when promoted from second to third grade, and 26.2% for those promoted from third to fourth grade. The rate of increase in the number of sentences written in the third and fourth grades was greater than the rate of increase for the fifth or sixth grades.

II. LEVELS OF STRUCTURE

The frequency and percentage of syntactic units, written by pupils in grades 2 through 6, which contain one or more levels of structure of modification or subordination are shown in Table 13. Syntactic units containing Levels I and II ranged from 51.7% and 59.7% in the two subgroups for grade two to 50.4% and 53.8% for the subgroups at grade six. There was a slight increase in the percentage of units with 3 levels--from 15.9% and 19.5% in grade two to 25.0% and 27.5% in grade six. In contrast, there was a decline in the use of sentences having only one level--28.3% and 17.4% in grade two to 12.7% and 11.1%

Table 12

COMPARISON OF NUMBER OF SYNTACTIC UNITS WRITTEN BY SAME GROUP OF SUBJECTS OVER A TWO-YEAR PERIOD

Group		Number of Sentences		Numerical Increase	Percent of Increase
First Year	Second Year	First Year	Second Year		
21	32	725	1,045	320	30.6
31	42	1,237	1,677	440	26.2
41	52	1,652	1,889	237	12.5
51	62	2,281	2,294	13	.5

Table 13

FREQUENCY AND PERCENT OF SYNTACTIC UNITS WHICH CONTAIN ONE OR MORE LEVELS OF STRUCTURE IN GRADES 2-6

Total of Sentences Having Only These Levels	Grades and Number of Sentences Analyzed at Each Grade											
	21 145		22 149		31 247		32 209		41 330		42 335	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Level I only	41	28.3	26	17.4	27	10.9	24	11.5	54	16.4	48	14.3
Levels I and II only	75	51.7	89	59.7	133	53.8	133	63.7	185	56.1	169	50.4
Levels I through III only	23	15.9	29	19.5	58	23.5	36	17.2	72	21.8	86	25.7
Levels I through IV only	5	3.4	1	0.7	19	7.7	12	5.7	14	4.2	26	7.8
Levels I through V only	1	0.7	0	0.0	4	1.6	3	1.4	4	1.2	4	1.2
Levels I through VI or more	0	0.0	1	0.7	1	0.4	0	0.0	0	0.0	1	0.3

Table 13 (Cont.)

FREQUENCY AND PERCENT OF SYNTACTIC UNITS
WHICH CONTAIN ONE OR MORE LEVELS OF STRUCTURE IN GRADES 2-6

Total of Sentences Having Only These Levels	Grades and Number of Sentences Analyzed at Each Grade							
	51		52		61		62	
	456		378		425		459	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Level I only	82	18.0	44	11.6	54	12.7	51	11.1
Levels I and II only	207	45.4	185	48.9	214	50.4	247	53.8
Levels I through III only	123	26.9	108	28.6	106	25.0	126	27.5
Levels I through IV only	36	7.9	26	6.9	40	9.4	34	7.4
Levels I through V only	4	0.9	11	2.9	9	2.1	6	1.3
Levels I through VI or more	3	0.7	5	1.3	2	0.5	3	0.7

in grade six. The use of units containing Levels IV, V, and VI is much greater in grade six than in grade two. For example, in grade two only one unit contained a Level V, giving an 0.7% of occurrence. In contrast, 15 cases in the two sixth grade groups showed percentages of 2.1 and 1.3. A syntactic unit which contains a Level V also has to contain a Level I, II, III, and IV. This was determined by the nature of the scheme of the analysis which was used in this study. Therefore when looking at the table it should be observed that all units having any given level of structure also contain the levels which support it.

The sentences containing Levels I, I and II, I to III, I to IV, I to V, and I to VI or more can be combined for the two subgroups appearing at each grade level, thus giving a distribution pattern for the 200 cases at each grade level. Figures 1 to 5 present the percentage of sentences having various levels of complexity which appeared at grades 2 through 6, respectively. Figure 1 shows graphically the distribution of syntactic units reaching each level of complexity for grade 2. The distributions for grades 3, 4, 5, and 6 are represented in Figures 2 through 5. The figures show the frequent use of Level II and the variations from year to year among all levels. In grade six the percentage of distribution does not reflect the increase in units having multi-levels of structures because the number of units written and analyzed also increased.

Table 14 combines all grade levels and shows the proportion of the various structural levels of modification or subordination for all groups (2-6) in the sample population representing 1000 cases, but not for individuals since selected pupils were involved during both years of the study. A total of 451 sentences having only one level of structure represented 14.3% of the total units analyzed for all ten groups in grades 2-6. 1,637 units which contained both Level I and II represented 52.2% of all units analyzed. Similarly 767 units or 24.4% contained Levels I, II, and III; 213 units contained Levels I, II, III, and IV, and

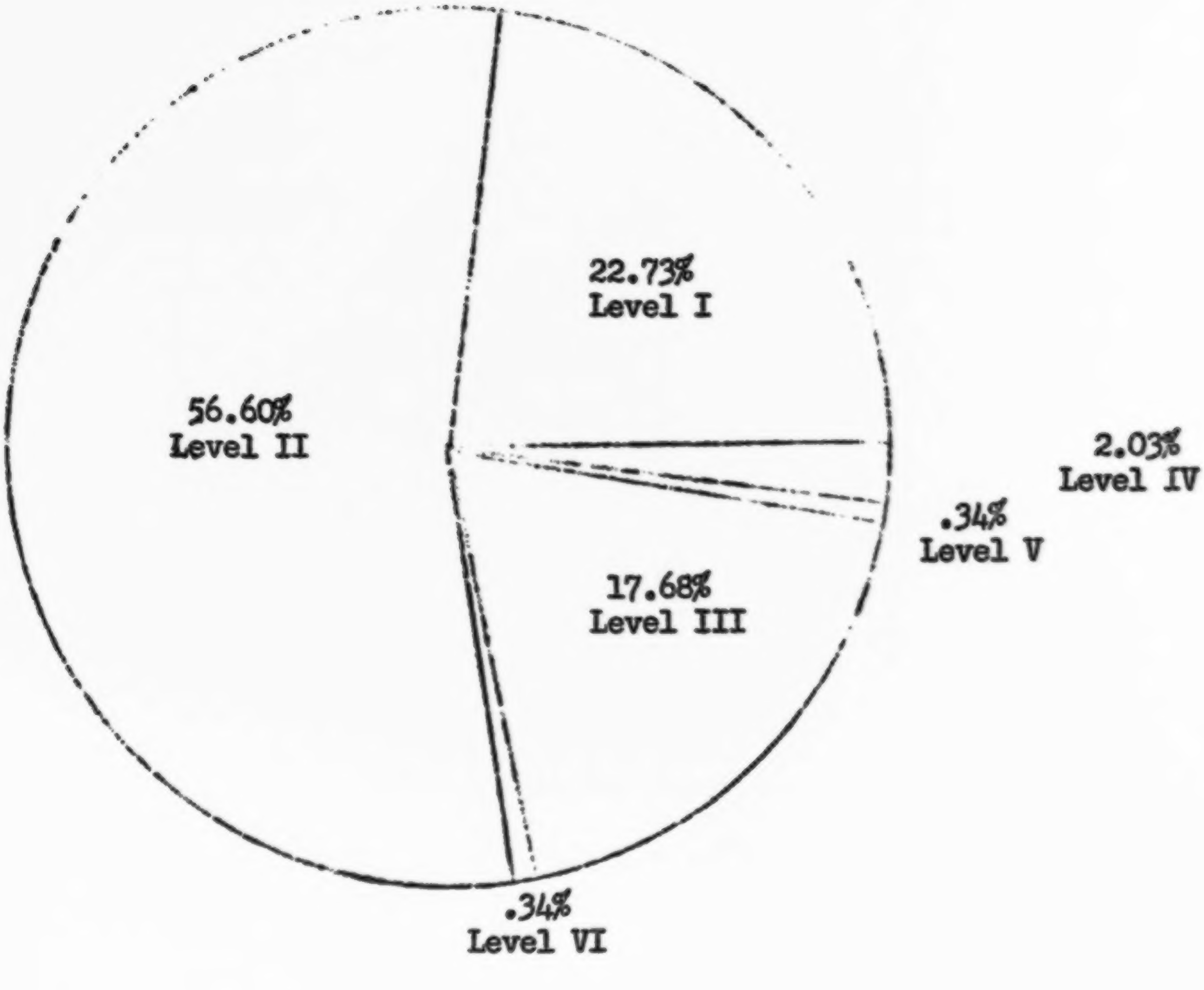

FIGURE 1. DISTRIBUTION OF SENTENCES ACCORDING TO NUMBER OF LEVELS AT GRADE 2

Number of subjects: 200

Number of syntactic units: 294

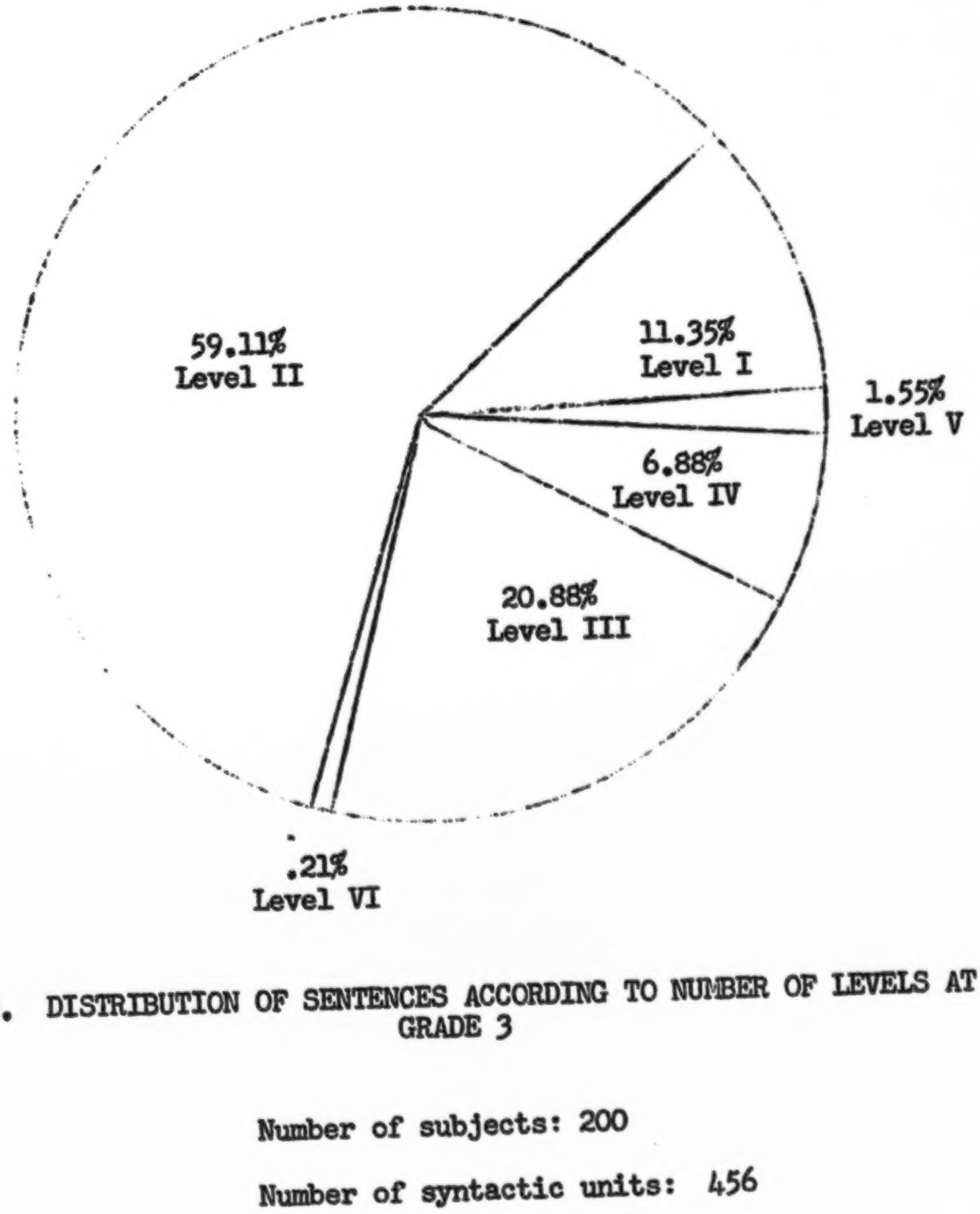

FIGURE 2. DISTRIBUTION OF SENTENCES ACCORDING TO NUMBER OF LEVELS AT GRADE 3

Number of subjects: 200

Number of syntactic units: 456

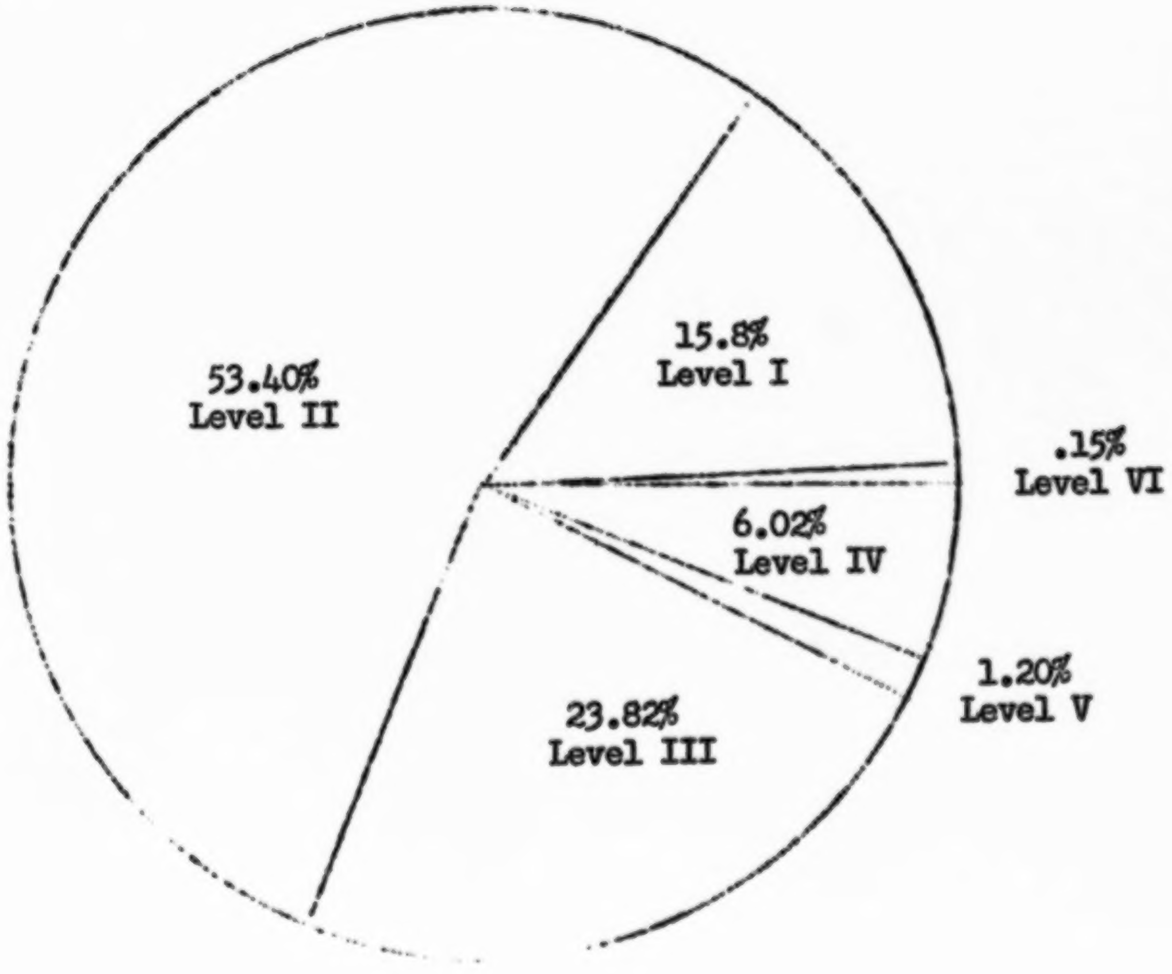

FIGURE 3. DISTRIBUTION OF SENTENCES ACCORDING TO NUMBER OF LEVELS AT GRADE 4

Number of subjects: 200

Number of syntactic units: 665

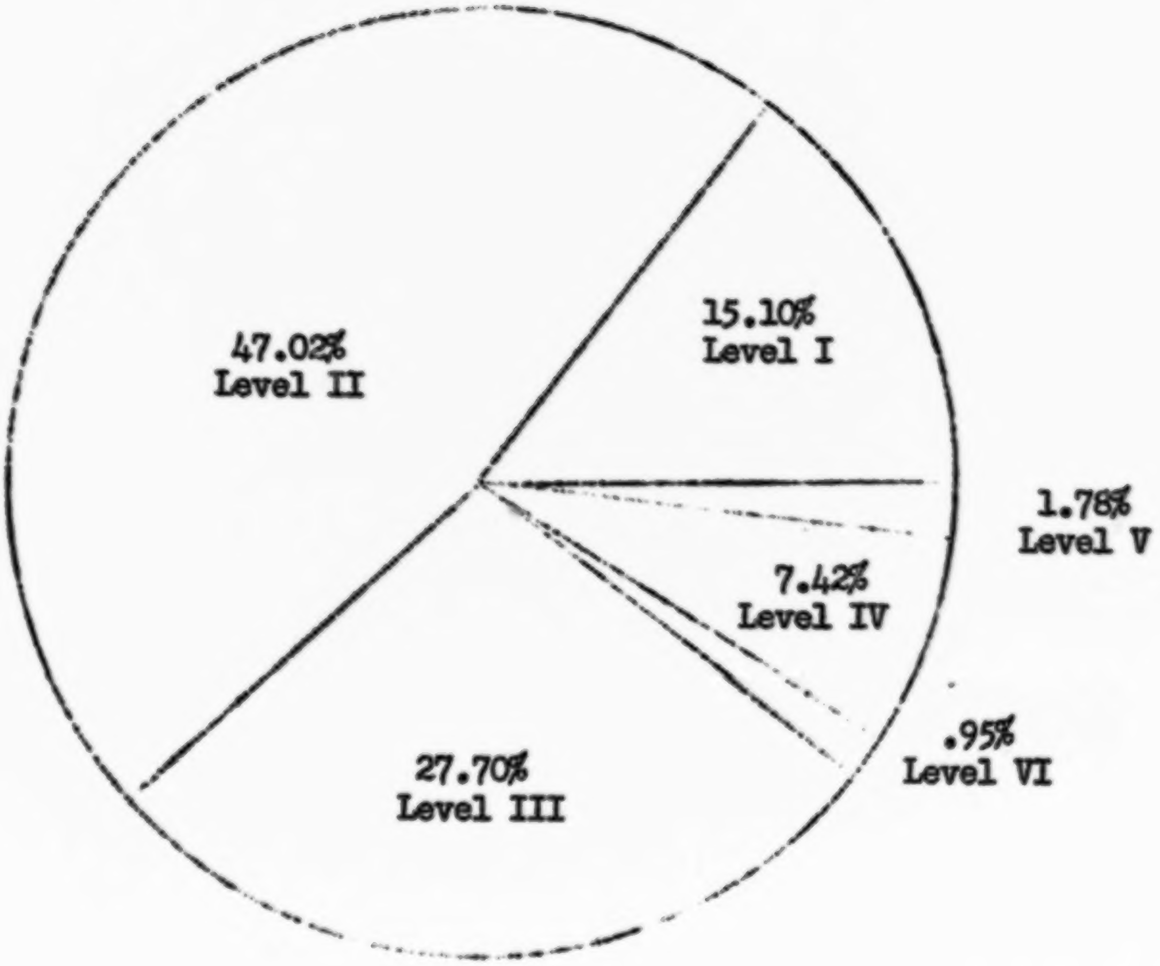

FIGURE 4. DISTRIBUTION OF SENTENCES ACCORDING TO NUMBER OF LEVELS AT GRADE 5

Number of subjects: 200

Number of syntactic units: 834

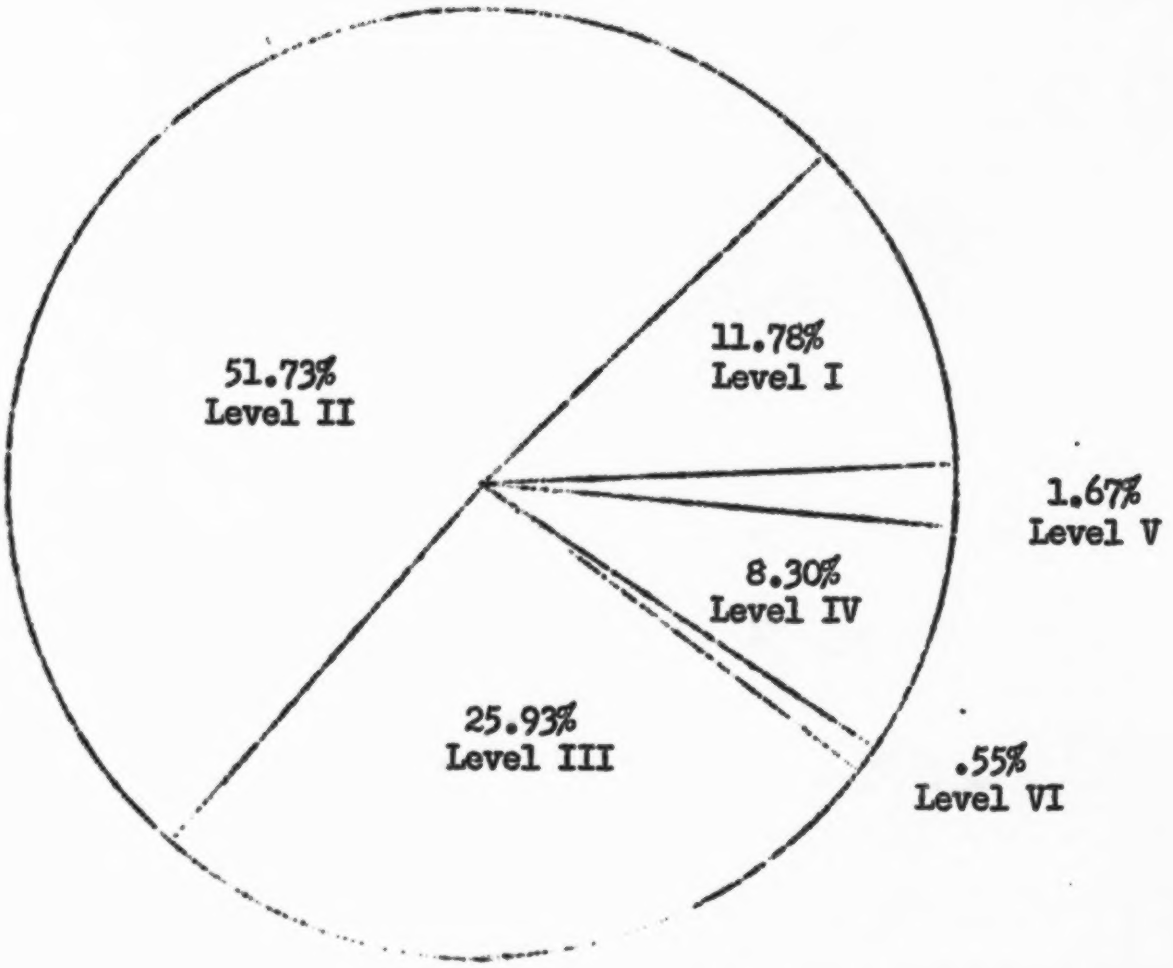

FIGURE 5. DISTRIBUTION OF SENTENCES ACCORDING TO NUMBER OF LEVELS AT GRADE 6

Number of subjects: 200

Number of syntactic patterns: 884

Table 14

PROPORTION OF VARIOUS LEVELS OF STRUCTURE EMPLOYED TO TOTAL SAMPLE POPULATION

Level	Frequency N=3,133	Percent
I only	451	14.3
I and II only	1,637	52.2
I through III only	767	24.4
I through IV only	213	6.7
I through V only	46	1.4
I through VI or more	16	0.5

represented 6.7%; 46 or 1.4% of the units contained Levels I, II, III, IV, and V; and 16 units contained Levels I, II, III, IV, V, VI or more. Few cases exceeded Level VI: one fifth-grade pupil and one sixth-grade pupil wrote Level VII units; another sixth-grade pupil wrote a Level X. Appendix C gives sample sentences with various levels.

III. SENTENCE PATTERNS

For the purpose of this study twelve sentence types were distinguished. These included the following:

1 2	subject-verb
1 2 4	subject-verb-object
1 2 3 4	subject-verb-indirect object-direct object
1 2 4 6	subject-verb-direct object-objective noun
1 2 4 6A	subject-verb-direct object-objective adjective
1 2B 5	subject-linking verb-noun or pronoun complement
1 2B 5A	subject-linking verb-adjective complement
1 2P	subject-passive verb
T1 2B 1	expletive "there"-verb-subject

In addition to these nine basic sentence patterns, three additional sentence types were identified as being syntactically significant: questions, inversions, and all sentences with compound predicates.

Tables 15 to 32 provide various information about sentence patterns. In Table 15 there is given the frequency of use of each of several sentence types by each of the groups and grades. At all grade levels the 1 2 4 sentence pattern was used most often, and at all grades the 1 2 sentence pattern was the next most frequently used pattern. Those sentences with a linking verb, 1 2B 5 and

Table 15 FREQUENCY AND DISTRIBUTION OF LEVEL I SYNTACTIC PATTERNS FOR UNITS HAVING SIMPLE PREDICATES ACCORDING TO GRADE LEVEL 2-6 WITH NUMBER OF UNITS ANALYZED

Basic Pattern and Related Patterns	Grade Level and Number of Units Analyzed					
	21 145	22 149	31 247	32 209	41 330	42 335
1 2B 5	8	14	27	16	30	24
1 2B 5A	11	15	12	23	27	19
1 2P	1	0	2	2	4	6
1 2 3 4	1	3	3	7	4	2
1 2 4 6	1	0	2	2	3	1
1 2 4 6A	0	1	2	1	0	1
1 2 4	64	67	98	88	121	123
1 2	38	36	70	48	93	82
I1 2B 1, etc.	3	6	13	7	12	19
4 1 2	1	0	0	0	1	0
2 1	0	0	0	1	2	2
W	4	4	8	2	3	8

Table 15 (Cont.) FREQUENCY AND DISTRIBUTION OF LEVEL I SYNTACTIC PATTERNS FOR UNITS HAVING SIMPLE PREDICATES ACCORDING TO GRADE LEVEL 2-6 WITH NUMBER OF UNITS ANALYZED

Basic Pattern and Related Patterns	Grade Level and Number of Units Analyzed			
	51 456	52 378	61 425	62 459
1 2B 5	28	26	34	42
1 2B 5A	35	29	35	38
1 2P	2	5	6	5
1 2 3 4	12	5	11	5
1 2 4 6	0	0	1	1
1 2 4 6A	3	0	4	2
1 2 4	157	131	141	170
1 2	121	87	105	125
I1 2B 1, etc.	10	21	14	12
4 1 2	4	3	2	10
2 1	2	4	2	3
W	9	6	6	8

1 2B 5A, were the next most frequently used patterns, followed by the use of the expletive pattern, T1 2B 1. Sentences with double objects, the subject-verb-direct object-objective noun (1 2 4 6), the subject-verb-direct object-objective adjective (1 2 4 6A), or the 1 2 3 4 pattern (subject-verb-indirect object-direct object) were not widely used by any group. Similarly the passive (1 2P) pattern was not widely used. This is also true of the questions and inversions revealed by the bottom three rows on the charts: 4 1 2 representing the inversion of the subject-verb-object pattern, 2 1 the inversion of the subject-verb pattern, and the W representing the question pattern. Tables 16-32 reveal various information about the addition of adverbial constructions to the basic sentence patterns. Specifically, tables 16-32 show the addition of the various movable and fixed elements--M1, M2, M3, M4, and M5 and F1, F2, F3, F4, and F5--to the basic patterns. Table 16, for example, reveals the addition of adverbial constructions to the 1 2B 5 pattern. It is interesting to note here that the top row contains most examples of this sentence type. In other words, movable and fixed adverbial elements are only rarely added to the basic pattern. Table 17 reveals that the situation is similar for the 1 2B 5A pattern. Thus elementary children do not often add large numbers of movable and fixed adverbial elements to basic sentence patterns containing a linking verb--1 2B 5 or 1 2B 5A. For both of these patterns, however, the most common adverbials added are: at the beginning of the clause, specifically the M1; or at the end of the clause, specifically the M5 or F5.

The situation is somewhat different for the 1 2P pattern revealed in Table 18. Notice in the top row that the 1 2P pattern is seldom used without added adverbial elements. The rest of the table reveals the various movable and fixed elements which are added to the basic pattern. For example, M1 is frequently added as is revealed by the distribution for the various groups, especially at

Table 16

FREQUENCY OF BASIC PATTERN 1 2B 5 AND FREQUENCY OF MOVABLE, FIXED, AND OTHER ELEMENTS ADDED TO THIS BASIC PATTERN FOR GRADES 2-6

Basic Pattern and Movables, Fixed, and Other Elements	Grade Level									
	21	22	31	32	41	42	51	52	61	62
1 2B 5	7	14	21	12	24	18	23	22	23	30
M1	0	0	3	1	2	1	4	0	4	7
F1	0	0	0	0	0	0	1	0	0	1
M2	1	0	0	2	0	0	0	0	1	0
F2	0	0	0	0	0	0	0	0	1	0
M3	0	0	0	0	0	0	0	0	0	0
F3	0	0	1	0	0	0	0	0	0	0
M4	0	0	0	0	0	1	0	0	2	0
F4	0	0	0	0	1	0	0	0	2	0
M5	0	0	3	1	2	4	1	3	2	5
F5	0	0	0	0	0	1	0	2	0	1
-2- or (2)	0	0	0	0	1	0	0	0	0	1

Table 17

FREQUENCY OF BASIC PATTERN 1 2B 5A AND FREQUENCY OF MOVABLE, FIXED, AND OTHER ELEMENTS ADDED TO THIS BASIC PATTERN FOR GRADES 2-6

Basic Pattern and Movables, Fixed, and Other Elements	Grade Level									
	21	22	31	32	41	42	51	52	61	62
1 2B 5A	7	9	9	13	17	7	24	15	23	23
M1	1	3	2	8	4	6	4	6	8	6
F1	0	0	0	0	0	0	0	0	0	0
M2	0	0	0	0	0	0	0	0	0	0
F2	0	0	0	0	0	1	0	0	0	0
M3	0	0	0	0	1	0	0	0	0	1
F3	0	0	0	0	0	0	0	0	0	0
M4	0	0	0	0	1	1	1	0	1	3
F4	0	0	0	0	0	0	0	0	0	1
M5	3	2	1	4	2	4	6	5	3	4
F5	0	3	0	0	2	1	0	3	1	2

Table 18

FREQUENCY OF BASIC PATTERN 1 2P AND FREQUENCY OF MOVABLE, FIXED, AND OTHER ELEMENTS ADDED TO THIS BASIC PATTERN FOR GRADES 2-6

Basic Pattern and Movables, Fixed, and Other Elements	Grade Level									
	21	22	31	32	41	42	51	52	61	62
1 2P	0	0	0	0	0	1	0	1	1	0
M1	0	0	1	1	5	2	1	0	3	2
F1	0	0	0	0	0	0	0	0	0	0
M2	0	0	0	0	0	0	0	0	0	0
F2	0	0	0	0	0	0	0	0	0	0
M3	0	0	0	0	0	0	0	1	0	0
F3	0	0	0	0	0	0	0	0	0	1
M4	0	0	0	1	0	0	1	1	2	0
F4	1	0	2	0	2	1	0	2	1	0
M5	0	0	0	0	0	0	0	0	0	0
F5	0	0	0	0	0	0	0	0	0	0
-2- or (2)	0	0	0	0	0	2	0	1	0	0
1 B 4	0	0	0	0	1	0	0	0	1	4

the fourth grade level. The M4 and F4 are also added more often than the other movable and fixed elements. The 1B4, which is the "to" phrase transform of the subject used with the passive verb, is used only rarely—except at the sixth grade.

Tables 19 and 20 reveal the addition of movable and fixed adverbial elements to basic two-object patterns—1 2 3 4, 1 2 4 6, and 1 2 4 6A. As is revealed by the charts, there is no extensive use of movable or fixed elements with these patterns.

Table 21 reveals the distribution of movable and fixed elements in the 1 2 4 pattern, the most widely used sentence type. It is interesting to note that at grade two, the greatest frequency of the 1 2 4 pattern is without any added adverbial modifiers. However, as students progress, they add considerably to their use of adverbial elements. Thus at grade six in the 62 group, we find the frequent use of especially the M1, M5, and F5 adverbial elements. In other words, students in the sixth grade using a 1 2 4 pattern add their adverbial elements at the beginning or end of the clause, rather than within it, or rather than between major slot positions. Table 21 is especially interesting in showing the growth of the use of the M1, M5, and F5 as the students progress from grade to grade, whereas, the 1 2 4 pattern by itself is also used relatively frequently. It is interesting to note that at no grade level is the F1, F2, F3 or F4 widely used, nor the M2, M3, or M4. Medial adverbials are not extensively used by any group.

Table 22 shows the distribution of adverbial elements in the 1 2 sentence pattern, the subject-verb pattern. The most widely used modifiers with this pattern are the F4 and the M1, M4, and M5. Thus it is apparent that when students opt to use the 1 2 sentence pattern, they most often place their adverbial modifiers following the verb. However, M1's are also frequently used, indicating

Table 19

FREQUENCY OF BASIC PATTERN 1 2 3 4 AND FREQUENCY OF MOVABLE, FIXED, AND OTHER ELEMENTS ADDED TO THIS BASIC PATTERN FOR GRADES 2-6

Basic Pattern and Movables, Fixed, and Other Elements	Grade Level									
	21	22	31	32	41	42	51	52	61	62
1 2 3 4 (1 2 3T 4)	1	0	3	4	2	2	5	3	4	4
M1	0	3	0	1	2	0	7	1	8	1
F1	0	0	0	0	0	0	0	0	0	0
M2	0	0	0	0	0	0	0	0	0	0
F2	0	0	0	0	0	0	1	0	0	0
M3	0	0	0	0	0	0	0	0	0	0
F3	0	0	0	0	0	0	0	0	0	0
M4	0	0	0	0	0	0	0	0	0	0
F4	0	0	0	0	0	0	0	0	0	0
M5	0	0	0	1	0	0	0	1	1	0
F5	0	0	0	1	0	0	0	0	0	0

Table 20 FREQUENCY OF BASIC PATTERN 1 2 4 6 - 1 2 4 6A AND FREQUENCY OF MOVABLE, FIXED, AND OTHER ELEMENTS ADDED TO THIS BASIC PATTERN FOR GRADES 2-6

Basic Pattern and Movables, Fixed, and Other Elements	Grade Level									
	21	22	31	32	41	42	51	52	61	62
1 2 4 6	1	0	1	1	2	1	0	0	1	1
1 2 4 6A	0	1	1	0	0	0	0	0	3	1
M1	0	0	1	1	0	0	1	0	1	1
F1	0	0	0	0	0	0	0	0	0	0
M2	0	0	1	0	0	0	0	0	0	0
F2	0	0	0	0	0	0	0	0	0	0
M3	0	0	0	0	0	0	0	0	0	0
F3	0	0	0	0	0	0	0	0	0	0
M4	0	0	0	0	0	0	0	0	0	0
F4	0	0	0	0	0	0	0	0	0	0
M5	0	0	0	1	1	1	3	0	0	0
F5	0	0	0	0	0	0	0	0	0	0

Table 21

FREQUENCY OF BASIC PATTERN 1 2 4 AND FREQUENCY OF MOVABLE, FIXED, AND OTHER ELEMENTS ADDED TO THIS BASIC PATTERN FOR GRADES 2-6

Basic Pattern and Movables, Fixed, and Other Elements	Grade Level									
	21	22	31	32	41	42	51	52	61	62
1 2 4	45	38	47	36	50	55	89	44	63	57
M1	8	18	17	26	40	36	40	45	33	59
F1	0	0	0	1	0	0	0	0	0	1
M2	0	1	3	1	8	4	1	5	7	5
F2	1	0	2	3	2	4	2	1	1	1
M3	0	0	1	0	0	0	2	3	2	1
F3	0	0	0	1	1	0	0	0	3	1
M4	0	1	0	3	1	2	1	2	0	5
F4	0	0	0	0	1	0	0	0	0	2
M5	6	4	11	14	11	20	22	32	22	43
F5	8	8	12	17	21	12	13	20	30	25
-2- or (2)	1	3	5	3	6	10	10	13	18	21

Table 22

FREQUENCY OF BASIC PATTERN 1 2 AND FREQUENCY OF MOVABLE, FIXED, AND OTHER ELEMENTS ADDED TO THIS BASIC PATTERN FOR GRADES 2-6

Basic Pattern and Movables, Fixed, and Other Elements	Grade Level									
	21	22	31	32	41	42	51	52	61	62
1 2	4	6	6	8	14	15	21	14	13	19
M1	7	16	21	11	24	25	43	25	35	32
F1	0	0	0	0	0	1	1	0	1	0
M2	0	1	2	2	5	0	5	5	1	2
F2	0	0	0	2	1	1	2	1	2	1
M3	0	0	1	0	0	2	1	0	1	3
F3	0	0	0	0	0	0	1	3	1	1
M4	7	7	2	6	7	12	18	24	24	27
F4	26	26	61	34	76	62	111	69	81	85
M5	5	2	7	3	13	9	14	17	12	18
F5	0	0	0	0	0	0	0	0	0	0
-2- or (2)	1	0	4	1	7	6	8	2	7	6

Table 23 FREQUENCY OF BASIC PATTERN CONTAINING I1 or T1 AND FREQUENCY OF MOVABLE, FIXED, AND OTHER ELEMENTS ADDED TO THIS BASIC PATTERN FOR GRADES 2-6

Basic Pattern and Movables, Fixed and Other Elements	Grade Level									
	21	22	31	32	41	42	51	52	61	62
I1 (simple)	0	0	2	1	0	0	1	1	0	2
T1 (simple)	2	1	1	3	3	5	1	7	4	4
M1	1.	4	10	2	10	11	6	8	9	3
F1	0	0	0	0	0	0	0	0	0	0
M2	0	1	0	1	0	0	0	1	1	0
F2	0	0	0	0	0	0	0	0	0	0
M3	0	0	0	0	0	0	0	0	0	0
F3	0	0	0	0	0	0	0	0	0	0
M4	0	0	0	0	2	4	2	4	1	3
F4	0	1	0	0	0	2	1	1	2	0
M5	0	0	0	0	0	0	0	0	0	0
F5	0	0	0	0	0	0	0	0	0	0
Total I1	0	0	2	1	1	0	1	1	1	2
Total T1	3	6	11	6	11	19	9	20	13	10

that the children frequently placed adverbial elements before the subject. There are few M2's, M3's, F2's, or F3's—adverbial elements between subject and verb or within the verb. As noted with the 1 2 4 sentence pattern, medial adverbials are not widely used by elementary children.

In the expletive sentence patterns, represented by the I1 and T1, adverbial modifiers are most often placed before the expletive. Notice especially at grades three and four the frequent use of the M1. This is true at all grade levels, however. M2's, F2's, M3's, and F3's are not widely used, indicating that adverbial elements are not often placed between major elements when the expletive sentence pattern is used. The use of the M4 and F4 indicates that adverbial elements are used following other major elements in the expletive sentence pattern less often than initial adverbials, but more often than medial adverbials.

Tables 24-32 represent some of the most widely used individual varieties of major sentence patterns. For example, Table 24 shows the most frequently used varieties of the 1 2 4 sentence pattern, according to grade and group. In this table we find the simple 1 2 4 sentence pattern with no added adverbial modifiers is the most often used variety. The second most often used is the 1 2 4 with an adverbial element placed before the subject; and the next two most frequently used varieties are with adverbial elements placed following the object, either movable or fixed adverbial elements.

Tables 25 and 26 show the most frequently used varieties of sentence patterns with two objects, according to grade and group. Since none of these are used frequently, individual varieties have very low frequencies.

Tables 27 and 28 reveal that the subject-linking verb-complement patterns most often have no adverbial modifiers added. Thus, in Table 27, by far the most often used variety is the simple 1 2B 5 with no added adverbial elements. In Table 28 there is a similar situation with the 1 2B 5A pattern. The next most

Table 24 MOST FREQUENTLY USED VARIETIES OF THE 1 2 4 SENTENCE PATTERN BY GRADE AND GROUP

	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year
1 2 4	45	38	47	36	50	55	89	44	63	57
M1 1 2 4	6	11	12	18	25	23	21	20	16	32
1 2 4 F5	5	6	9	9	13	9	8	10	14	15
1 2 4 M5	4	4	6	6	6	9	10	13	8	12
M1 1 2 4 F5	0	2	2	3	6	2	3	7	5	1
1 2 -2- 4	1	0	2	0	2	4	5	1	4	3
1 2 M4 4	0	0	0	2	0	1	1	1	0	4
M1 1 2 4 M5	0	0	1	0	1	2	4	1	0	6
1 M2 2 4	0	1	1	0	4	2	1	1	2	3
M1 M1 1 2 4	0	1	0	0	1	3	2	4	2	2
1 2 4 M5 M5	0	0	0	1	1	2	1	4	1	2
1 2 4 (2)	0	0	1	0	0	2	1	2	2	3
1 F2 24	0	0	2	2	1	1	1	1	0	1

Table 25 MOST FREQUENTLY USED VARIETIES OF THE 1 2 3 4 SENTENCE PATTERN BY GRADE AND GROUP

	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year
1 2 3 4	1	0	3	2	2	2	4	3	3	4
M1 1 2 3 4	0	3	0	1	2	0	5	1	4	1
1 2 3T 4	0	0	0	2	0	0	1	0	1	0
1 2 3 4 M5	0	0	0	1	0	0	0	1	1	0

Table 26 MOST FREQUENTLY USED VARIETIES OF THE 1 2 4 6 SENTENCE PATTERN BY GRADE AND GROUP

	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year
1 2 4 6	1	0	1	1	2	1	0	0	1	1
M1 1 2 4 6	0	0	1	1	0	0	0	0	1	1
1 2 4 6 M5	0	0	0	0	1	0	0	0	0	0

MOST FREQUENTLY USED VARIETIES OF THE 1 2 4 6A SENTENCE PATTERN BY GRADE AND GROUP

1 2 4 6A	0	1	1	0	0	0	0	0	3	1
M1 1 2 4 6A	0	0	0	0	0	0	1	0	1	1
1 2 4 6A M5	0	0	0	1	0	1	1	0	0	0
1 M2 2 4 6A	0	0	1	0	0	0	0	0	0	0
1 2 4 6A M5 M5	0	0	0	0	0	0	1	0	0	0

Table 27 MOST FREQUENTLY USED VARIETIES OF THE 1 2B 5 SENTENCE PATTERN BY GRADE AND GROUP

	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year
1 2B 5	7	14	19	12	24	18	23	21	22	29
1 2B 5 M5	0	0	2	1	2	3	0	2	2	4
M1 1 2B 5	0	0	2	0	2	1	2	0	4	4
1 M2 2B 5	1	0	0	2	0	0	0	0	1	0
1 2PB 5	0	0	2	0	0	0	0	1	0	1
1 2B M4 5	0	0	0	0	0	1	0	0	2	0
F1 1 2B 5	0	0	0	0	0	0	1	0	0	1
M1 M1 1 2B 5	0	0	0	0	0	0	1	0	0	1

Table 28 MOST FREQUENTLY USED VARIETIES OF THE 1 2B 5A SENTENCE PATTERN BY GRADE AND GROUP

	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year
1 2B 5A	7	9	9	13	17	7	24	14	22	23
M1 1 2B 5A	1	2	2	6	4	5	4	5	7	4
1 2B 5A M5	3	1	1	2	2	4	6	5	2	3
1 2B 5A F5	0	1	0	0	1	1	0	2	1	2
M1 1 2B 5A M5	0	1	0	2	0	0	0	0	1	1
1 2B M4 5A	0	0	0	0	1	0	1	0	1	2
1 2 M3 2BN 5A	0	0	0	0	1	0	0	0	0	1

frequently used variety, the M1 1 2B 5A, is rarely used by comparison. Thus, as we noticed in Tables 16 and 17 earlier, when students opt to use the 1 2B 5 or 1 2B 5A sentence patterns, they only infrequently opt to add adverbial elements in any position.

The 1 2P sentence pattern, representing the use of the passive voice, usually has adverbial elements added as is revealed by Table 29 which shows the most frequently used varieties of the 1 2P sentence pattern. The use of the 1 2P pattern without the addition of adverbials is quite rare. It is the third most commonly used variety, following after the 1 2P F4 and M1 1 2P.

Table 30 shows the most frequently used varieties of the 1 2 sentence pattern according to grade and group. It is interesting to note that again the use of the sentence pattern with a fixed adverbial following the verb is the most common variety, more common than the use of the simple pattern without any modifiers added. It is also interesting to note that each of the thirteen varieties listed (the most common thirteen varieties of this pattern), have adverbial elements added before or after the subject or verb and none has elements added between subject and verb, or within the verb.

The most frequently used varieties of the T1 or expletive pattern are revealed in Table 31. The most frequently used variety of the expletive sentence pattern is with an adverbial element preceding the expletive. Thus, when children opt to use the expletive sentence pattern, they also opt to place an adverbial element before the expletive, usually an adverbial of time. Thus we have the "once upon a time" pattern so often used by elementary children, especially at grades three, four, and five.

Table 32 reveals a few of the most frequently used varieties of questions. However, since relatively few questions were used, and in these few questions there was considerable variety, the chart reveals little useful information about the choice of questions which children used.

Table 29 MOST FREQUENTLY USED VARIETIES OF THE 1 2P SENTENCE PATTERN BY GRADE AND GROUP

	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year
1 2P F4	1	0	1	0	1	1	0	2	1	0
M1 1 2P	0	0	0	1	0	2	1	0	2	1
1 2P	0	0	0	0	0	1	0	1	1	0
1 2P 1B4	0	0	0	0	1	0	0	0	0	2
1 2P M4	0	0	0	1	0	0	1	0	1	0
M1 1 2P F4	0	0	1	0	1	0	0	0	0	0
1 2P -2-	0	0	0	0	0	1	0	1	0	0

Table 30 MOST FREQUENTLY USED VARIETIES OF THE 1 2 SENTENCE PATTERN BY GRADE AND GROUP

	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year
1 2 F4	16	9	30	14	35	29	43	29	39	34
1 2	4	6	6	8	14	15	21	14	13	19
1 2 F4 M5	3	0	6	2	11	4	9	12	8	12
M1 1 2	2	1	5	4	2	3	6	5	7	8
1 2 M4	2	3	0	4	2	4	5	3	5	5
1 2 M4 M4	1	1	1	1	1	2	3	7	5	6
1 2 F4 F4	1	2	2	3	3	3	6	2	1	4
M1 1 2 F4 F4	0	0	1	0	0	2	4	2	3	1
M1 1 2 F4 M5	1	1	0	0	2	1	2	1	1	3
1 2 -2-	0	0	2	0	2	2	1	0	1	2
1 M2 2 F4	0	1	1	2	0	0	3	1	0	1
M1 1 2 -2-	1	0	0	0	2	2	1	0	1	1
1 2 -2- F4	0	0	1	0	2	0	1	0	1	2

Table 31 MOST FREQUENTLY USED VARIETIES OF THE T1 SENTENCE PATTERN BY GRADE AND GROUP

	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year
M1 T1 2B 1	1	2	10	2	4	8	4	6	2	3
T1 2B 1	2	1	1	3	3	5	1	7	4	4
T1 2B 1 M4	0	0	0	0	0	1	2	2	1	3
M1 M1 T1 2B 1	0	0	0	0	3	0	0	1	1	0
T1 2B 1 F4	0	1	0	0	0	1	0	1	1	0
M1 T1 2 1	0	0	0	0	0	1	1	0	2	0

Table 32 MOST FREQUENTLY USED VARIETIES OF THE W SENTENCE PATTERN BY GRADE AND GROUP

	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year	First Year	Second Year
W2 1 2N 4	1	1	2	0	1	1	1	1	2	1
W 2 1 2N	2	0	2	0	0	0	3	0	1	0
W4 2 1 2N 4N	0	1	1	0	0	1	0	0	0	1
W2 1	1	1	0	0	0	1	0	0	1	0
W 2 1 2N F4	0	0	1	0	0	1	0	0	0	1

IV. NOUN SLOTS

The most frequently used noun slots are subject, direct object, and complement; and it is these which are discussed in this section. As with the adverbial constructions discussed in the following section, noun slots consist sometimes of a single word and at other times of a complex construction. In Table 33, where the number of 1, 4, and 5 slots at Level II is given, what we are actually considering is the constituents on the second level of slots on the first level. In each case these are complex constructions; thus in Table 33 we have the total number of complex 1, 4, and 5 slots analyzed on the second level. The fact that there are more object than subject slots reveals that many subject slots consist of merely a single element or single word, and thus are not further analyzed on a second level. The increase for both 1 and 4 slots from grade two through grade six is approximately the same.

Table 34 shows the distribution for each group of the various kinds of syntactic structures used for the subjects of sentences. Level II analyzes the constituents of these Level I slots when they are broken down on the second level. For both simple subjects consisting of a single word, and complex subjects consisting of a noun modified by various other elements, the increase is approximately the same in grades two through six. In both cases there are about three times as many word or phrasal subjects in grade six as in grade two. Thus the proportion of single-word subjects or nouns modified by other elements remains approximately the same as the students progress from grades two to six. The lower portion of Table 34 reveals various types of complexity within the subject of the clause. The varieties are: (1) the subject consists of a clause functioning as a subject, (2) infinitive or other verbal phrase, (3) a simple noun-headed construction with all single-word modifiers preceeding the noun, (4) a compound noun, (5) a noun

Table 33 THE NUMBER OF 1, 4, AND 5 SLOTS AT LEVEL II ACCORDING TO GRADE LEVELS

Kind of Slot	Grade levels									
	21	22	31	32	41	42	51	52	61	62
1 slot	31	48	79	63	91	91	124	122	128	128
4 slot	50	57	87	79	102	128	156	123	160	169
5 slot	6	7	15	13	22	20	23	20	26	34

Table 34 TYPES AND TOTALS OF SUBJECT SLOT (1) APPEARING AT LEVEL II ACCORDING TO GRADE LEVELS

	Grade Levels									
Type of Subject Slot	21	22	31	32	41	42	51	52	61	62
Frequency:										
Total 1's	143	144	239	204	321	325	445	376	412	458
Simple 1's	112	96	160	141	230	234	321	254	284	330
Complex 1's	31	48	79	63	91	91	124	122	128	128
Type of Complexity:										
Clause	0	0	2	0	1	2	1	0	3	2
Inf. Phrase	0	0	1	0	0	2	1	1	0	1
Noun-headed	26	44	61	52	70	64	77	85	105	89
Compound	2	0	2	4	7	6	15	4	1	15
NP + IG	0	0	0	1	0	1	0	0	3	1
NP + IF	0	0	0	0	0	0	0	0	1	1
NP + ED	0	2	2	1	3	3	1	4	1	1
NP + AP	0	0	1	1	2	1	7	0	4	0
NP + P	3	2	4	0	6	3	12	20	6	11
NP + C	0	0	6	1	2	6	8	8	5	3
NP + AJ	0	0	0	0	0	0	0	0	0	1
NP + PN	0	0	1	3	0	3	4	0	0	3

phrase including a present participial phrase, (6) a noun phrase including an infinitive or an infinitive phrase, (7) a noun phrase including a past participial phrase, (8) a noun phrase including an appositive, (9) a noun phrase including a prepositional phrase, (10) a noun phrase with a modifying adjective clause, (11) a noun phrase with an adjective following the noun, or (12) a noun phrase with a pronoun following the head noun or pronoun.

It should be noted that at all grade levels the noun phrase consisting of a noun preceded by simple or single-word modifiers is the most frequently used variety. Together with single-word subjects, they make up the great bulk of all sentence subjects. The only variety of subjects of sentences which shows a notable increase in use from grade two to grade six is the noun phrase with a prepositional phrase following the head noun. Verbal phrases either functioning as the subject or modifying the head noun in the subject slot and clauses as subject or modifying the head noun in the subject slot are both quite frequently used. Appositives were used only slightly through all groups. In general, at grades two through six, for most sentences the child chooses a subject which consists of either a single word or a noun preceded by simple modifiers--generally determiner, adjective, possessive noun or pronoun, or attributive noun.

The situation for the object slot (4) is somewhat different from that of the subject slot. We noted that, for the subjects, students generally choose a single word or a noun modified by a determiner and adjective. On the other hand, for the object slot, students often choose more complex constructions; thus, while the subjects most of the time consisted of a single word, the objects more often consist of the complex structure. The most commonly used variety of object is the simple noun-headed noun phrase--for example, the noun preceded by a determiner or adjective or both. The next most common variety of direct object is the single-word object. The clause as object is considerably more often used than

Table 35 TYPES AND TOTALS OF OBJECT SLOT (4) APPEARING AT LEVEL II ACCORDING TO GRADE LEVELS

	Grade Levels									
Type of Object Slot	21	22	31	32	41	42	51	52	61	62
Frequency:										
Total 4's	81	75	113	114	151	166	231	184	214	238
Simple 4's	31	18	26	35	49	38	75	61	54	69
Complex 4's	50	57	87	79	102	128	156	123	160	169
Type of Complexity:										
Clause	10	15	18	14	30	35	39	35	45	40
Verbal Phrase	5	1	6	2	4	6	7	8	13	8
Noun-headed	25	34	45	47	40	62	70	57	70	87
Compound	6	4	3	3	9	5	6	3	8	9
NP + IG	0	0	1	0	3	3	2	0	0	5
NP + IF	0	0	0	1	3	3	4	0	5	3
NP + ED	1	1	1	1	1	0	1	2	1	4
NP + AP	0	0	0	1	2	2	3	1	0	2
NP + C	2	1	0	4	2	6	4	2	6	4
NP + P	4	1	11	4	8	8	19	12	12	12
NP + AJ	0	0	0	1	0	0	0	0	0	0
NP + PN	0	0	1	1	1	0	0	2	0	0

Table 36 TYPES AND TOTALS OF COMPLEMENT SLOT (5) APPEARING AT LEVEL II ACCORDING TO GRADE LEVELS

Type of Complement Slot	Grade Levels 21	22	31	32	41	42	51	52	61	62
Frequency:										
Total 5's	8	14	29	16	30	24	32	28	37	42
Simple 5's	2	7	14	3	8	4	9	8	11	8
Complex 5's	6	7	15	13	22	20	23	20	26	34
Type of Complexity:										
Clause	0	0	1	1	0	3	5	1	4	3
Verbal Phrase	0	0	0	0	0	1	1	0	0	0
Noun-headed	3	4	10	10	13	10	11	13	15	18
Compound	2	1	1	0	2	1	1	4	1	1
NP + IF	0	0	1	1	1	0	1	0	0	1
NP + ED	0	0	0	1	0	0	0	0	0	0
NP + IG	0	0	0	0	0	0	0	0	0	0
NP + AP	0	0	0	0	1	0	0	0	0	2
NP + P	1	1	1	0	3	2	5	1	6	6
NP + C	0	1	1	0	2	2	0	0	0	3
NP + AJ	0	0	0	0	0	1	0	1	0	1

the clause as subject, and is, in fact, the third most frequently used variety of direct object. As in the subject slot, there is an increase from grade two to grade six in the use of a noun phrase with a prepositional phrase following the head noun. All other varieties of the object slot appear relatively infrequently, especially verbal phrases or noun phrase plus verbal phrases. As in the subject slot, appositives are used very rarely, and clauses following the head noun are likewise used only rarely in object slots.

In general the constituents of complement slots seem more similar to constituents of object slots than to constituents of subject slots. Thus at each grade level the single-word noun complement appears less often than a complex complement. The most common variety of complex complement is the noun phrase--headed by a noun and preceded by a single-word modifier. All other varieties of complements appear rarely--the clause, verbal phrase, noun phrase with nested verbal phrase or clause, noun phrase plus appositive, adjective or prepositional phrase--although there is an increase in the use of the noun phrase with a nested prepositional phrase in grade six.

Tables 37, 38, and 39 show the distribution of complex 1, 4, and 5 slots at higher levels of nesting, specifically in Levels III, IV, V, and VI, according to grade levels. When a writer's syntax shows complexity, constructions are nested in one another, and complex slots will appear at higher levels. These tables show the distribution of the noun slots at these levels. Only complex slots are shown, thus indicating the nesting of one variety of complexity within other types of complex structures. In Table 37 we see the rare appearance of complex 1 slots at Levels V and VI; however, they appear somewhat more frequently at Levels III and IV. There is in fact a notable increase in the use of complex 1 slots at Levels III and IV from grade two to grade six. A similar situation appears in the 4 slots. Complex objects appear most often at Level III, somewhat less often

Table 37

THE NUMBER OF COMPLEX 1 SLOTS AT LEVELS III, IV, V, AND VI
ACCORDING TO GRADE LEVELS

Level of Structure	Grade Levels 21	22	31	32	41	42	51	52	61	62
III	5	9	11	5	10	12	15	15	23	18
IV	1	0	4	1	2	4	2	5	5	6
V	0	0	1	0	0	0	2	0	1	0
VI	0	1	1	0	0	0	1	0	1	0

Table 38

THE NUMBER OF COMPLEX 4 SLOTS AT LEVELS III, IV, V, AND VI
ACCORDING TO GRADE LEVELS

Level of Structure	Grade Levels 21	22	31	32	41	42	51	52	61	62
III	7	4	12	7	17	25	28	34	41	35
IV	1	1	6	2	2	5	5	5	9	13
V	0	0	2	2	1	0	0	1	1	2
VI	0	0	0	0	0	1	0	1	1	2

Table 39

THE NUMBER OF COMPLEX 5 SLOTS AT LEVELS III, IV, AND V ACCORDING TO GRADE LEVELS

Levels of Structure	Grade Levels									
	21	22	31	32	41	42	51	52	61	62
III	1	2	7	3	4	5	7	10	5	3
IV	2	0	2	1	3	0	2	1	1	0
V	0	0	0	0	0	0	0	1	1	0

at Level IV, and only rarely at Levels V and VI. At each level, however, there is an increase from the lower grades to the upper; thus there are, for example, only 11 complex 4 slots at Level III in second grade, but 76 in sixth grade--about seven times as many. Similarly at Level IV there are only two complex 4 slots in the second grade, but 22 in the sixth grade. We find a similar situation in the 5 slots, although these appear frequently in all groups; and thus there are no striking trends in the data we have.

In summary, noun slots do not show a great deal of complexity at any grade level. For the subject slot the students generally use a single-word noun, or less often a noun preceded by a determiner or adjective or both, or perhaps some other single-word modifier; only rarely do students use complex subjects consisting of a clause or a verbal phrase or a compound noun or a noun phrase followed by a verbal phrase, prepositional phrase, or clause. Our findings are similar for the object slot; however, the single-word noun object is somewhat less frequent than the single-word noun subject. Students more often use phrases than single words as objects. Clauses are likewise used considerably more frequently in the object than in the subject slot. And there is a greater variety in object slots than subject slots--more use of complex objects by all groups than there is of complex subjects.

V. ADVERBIALS

In this study all adverbials, regardless of syntactic construction, were classified as either movable or fixed. In contrast, in other recent studies of children's syntax all adverbials were called movable--regardless of their degree of relative movability or fixedness. If structures were easily moved from one position in the clause to another, they were considered movable; and if they were relatively fixed in one position and other positions seemed unnatural, they were considered fixed. They were then classified as to position: (1) before all other major slots in a clause, (2) between the subject and verb or between the first two major elements, (3) within the verb, (4) following the verb or following the second major element, and (5) following an object or complement. Thus, an M1 is a movable adverbial preceding other elements in the clause, and an M5 is a movable following an object or complement. In addition to being classified according to position and relative fixedness or movability, adverbial structures can also be classified according to syntactic structure or constituents. Thus M1's can be categorized as consisting of single words, prepositional phrases, clauses, verbal phrases, noun-headed, adverb-headed, or other constructions.

Table 40 shows the distribution of the various movables, according to whether they are simple one-word movables or complex movables consisting of more than a single word, and the total of each type according to each grade and group. We see in Table 40, for example, that the simple M1 construction, thus a single word at the beginning of a sentence or clause, increases only slightly throughout the groups, whereas the complex M1 construction, consisting of any adverbial structure of more than a single word, increases considerably from grade two to grade six. The grade two first-year group has only eight complex M1's, but the grade six second-year group has 103--a considerable increase.

M2 is a relatively infrequently used construction in all groups; however, there is somewhat of an increase in grades five and six. It is only rarely used in grade two. Notice especially that the complex M2 is rarely used; thus most adverbials used between the subject and the verb, or between the first two main elements in a clause, will consist of single words.

The situation is similar for the M3. This is, however, a rare construction in any grade and virtually always consists of a single word. It is rare that any

Table 40 FREQUENCY OF VARIOUS MOVABLES AT LEVEL II ACCORDING TO GRADE LEVELS

Type of Movable	Grade Levels 21	22	31	32	41	42	51	52	61	62
M1 Complex	8	31	34	41	63	52	67	75	72	103
M1 Simple	14	16	24	18	33	45	48	26	38	31
M1 Total	22	47	58	59	96	97	115	101	110	134
M2 Complex	0	0	1	0	1	0	1	1	0	1
M2 Simple	2	2	7	5	12	4	7	13	16	14
M2 Total	2	2	8	5	13	4	8	14	16	15
M3 Complex	0	0	0	0	0	1	0	0	0	0
M3 Simple	0	0	3	0	1	1	4	5	4	4
M3 Total	0	0	3	0	1	2	4	5	4	4
M4 Complex	4	6	3	8	3	11	21	28	27	46
M4 Simple	4	2	0	2	9	13	9	13	10	11
M4 Total	8	8	3	10	12	24	30	41	37	57
M5 Complex	14	5	19	19	31	31	42	58	42	64
M5 Simple	2	5	5	5	4	8	8	5	4	9
M5 Total	16	10	24	24	35	39	50	63	46	73

adverbial element within the verb consists of more than a single word.

As with other varieties of movables, the M4 increases considerably from grade two to grade six. The total number of M4's used at grade two is 16; the total at grade six is 94—a considerable increase. Here the great increase is in the number of complex M4's rather than in simple or one-word M4's. Simple M4's, a single-word adverbial modifier following the verb, are relatively infrequent at any grade level, whereas complex M4's increase considerably from grade two to grade six, and at grade six make up the major portion of all M4's.

As with the M4's, the simple or single-word M5 is a rare construction at any grade level. There are, for example, only two in the 21 group and only four in the 61 group. However, the M5 consisting of a complex construction, or any construction of more than a single word, increases considerably in use from grade two to grade six. There are only 19 complex M5's used at grade two, but over 100 used at grade six. Although there is a considerable increase in the use of complex M5's from second grade to sixth grade, at all grades the complex M5's make up the bulk of all M5's.

Table 41 gives a breakdown of the most frequently used varieties of M1, the movable adverbial preceding the subject of the sentence. The increase in the use of the initial adverbial clause is especially noticeable, and the same is true of the initial prepositional phrase. For example, the initial adverbial clause increases from nine in the two second-grade groups to 60 for the two sixth-grade groups, and the prepositional phrase increases from four for the two second-grade groups to 30 for the two sixth-grade groups. Likewise the use of the prepositional phrase plus X, indicating the nesting of some other complex construction within a prepositional phrase, indicates the increased use of complex constructions by children as they progress from grade to grade, and of complex constructions nested within one another. Noun-headed constructions, especially

Table 41 TYPES AND TOTALS OF CONSTITUENT FILLERS FOR M1 APPEARING AT LEVEL II ACCORDING TO GRADE LEVELS

	Grade Levels									
Type of M1	21	22	31	32	41	42	51	52	61	62
Frequency:										
Total M1's	22	47	58	59	96	97	115	101	110	134
Simple M1's	14	16	24	18	33	45	48	26	38	31
Complex M1's	8	31	34	41	63	52	67	75	72	103
Type of Complexity:										
Clause	1	8	10	8	17	18	22	27	25	35
Prep. Phrase	0	4	3	4	8	8	10	12	11	19
Prep. Phrase + X	0	2	4	6	5	4	2	0	8	6
Verbal	0	0	1	0	0	0	1	2	0	2
Noun-headed	5	15	10	16	23	20	19	24	23	32
Adverb-headed	1	2	1	5	7	0	6	5	2	3
Adv. + Prep. Phrase	1	0	5	2	3	2	7	5	3	6

phrases like "one day," used to introduce sentences, are used relatively frequently by all groups. Only the first-year second-grade group uses this construction infrequently.

Table 42 reveals the striking increase in the use of prepositional phrases following the verb. As was seen previously, following the verb single words are used less often than are complex adverbial constructions. The M4 clause is relatively infrequent, used to any degree only by the fifth- and sixth-grade groups. Similarly the prepositional phrase plus another complex construction nested within it, the noun-headed, adverb-headed, and adverbial phrase are likewise used only rarely in the M4 position.

The M5, a movable adverbial construction following an object or complement, is usually a clause or a prepositional phrase. The M5 is used only infrequently at second grade and increases in frequency to sixth grade. This is especially true, as was noted previously, of complex M5's. The most commonly used varieties of the complex M5 are the clause, increasing from eight in the second grade to 32 in the sixth grade; and the prepositional phrase, increasing from seven at second grade to 41 at sixth grade. Other types of constructions are still rare within the M5 slot. There are relatively few verbal phrases, noun-headed constructions, adverb-headed constructions, prepositional phrases with another construction nested within them, and adverb plus prepositional phrase constructions in the M5 slot.

As was noted previously, the most common position for movable elements of an adverbial nature are: at the beginning of the clause or at the end of the clause. On the other hand, fixed adverbial elements seldom appear before the subject, between the verb and subject, or within the verb. Thus, the F1, F2, and F3 are all rarely used adverbial constructions. It is interesting to note that for all of the fixed adverbial constructions, a great majority are simple rather than

Table 42 TYPES AND TOTALS OF CONSTITUENT FILLERS FOR M4 APPEARING AT LEVEL II ACCORDING TO GRADE LEVELS

Type of M4	Grade Levels									
	21	22	31	32	41	42	51	52	61	62
Frequency:										
Total M4's	8	8	3	10	12	24	30	41	37	57
Simple M4's	4	2	0	2	9	13	9	13	10	11
Complex M4's	4	6	3	8	3	11	21	28	27	46
Type of Complexity:										
Clause	0	1	0	2	1	1	7	2	3	11
Prep. Phrase	2	2	1	4	2	9	6	13	15	26
Prep. Phrase + X	0	0	1	0	0	1	1	2	0	1
Verbal	1	1	0	0	0	0	0	2	8	1
Noun-headed	1	1	1	2	0	0	4	6	0	3
Adverb-headed	0	1	0	0	0	0	1	0	1	2
Adv. + Prep. Phrase	0	0	0	0	0	0	2	1	0	2

Table 43 TYPES AND TOTALS OF CONSTITUENT FILLERS FOR M5 APPEARING AT LEVEL II ACCORDING TO GRADE LEVELS

Type of M5	Grade Levels									
	21	22	31	32	41	42	51	52	61	62
Frequency:										
Total M5's	16	10	24	24	35	39	50	63	46	73
Simple M5's	2	5	5	5	4	8	8	5	4	9
Complex M5's	14	5	19	19	31	31	42	58	42	64
Type of Complexity										
Clause	4	4	5	4	11	13	8	29	13	19
Prep. Phrase	6	1	8	8	10	14	20	14	16	25
Prep. Phrase + X	1	0	0	1	1	3	4	1	1	4
Verbal	0	0	2	2	6	1	6	6	7	5
Noun-headed	2	0	3	4	3	0	4	6	3	2
Adverb-headed	1	0	0	0	0	0	0	1	2	5
Adv. + Prep. Phrase	0	0	1	0	0	0	0	1	0	4

Table 44 FREQUENCY OF VARIOUS FIXED ELEMENTS AT LEVEL II ACCORDING TO GRADE LEVELS

Types of Fixed Elements	Grade Levels									
	21	22	31	32	41	42	51	52	61	62
F1 Complex	0	0	0	1	1	1	2	0	0	2
F1 Simple	0	0	0	0	1	3	2	2	2	1
F1 Total	0	0	0	1	2	4	4	2	2	3
F2 Complex	0	0	0	0	1	0	0	0	0	0
F2 Simple	1	0	2	6	2	11	6	4	4	2
F2 Total	1	0	2	6	3	11	6	4	4	2
F3 Complex	0	0	0	0	0	0	0	0	1	0
F3 Simple	0	0	1	1	1	0	2	2	3	3
F3 Total	0	0	1	1	1	0	2	2	4	3
F4 Complex	22	17	51	30	69	57	108	83	83	85
F4 Simple	12	10	21	9	26	36	46	27	34	35
F4 Total	34	27	72	39	95	93	154	110	117	120
F5 Complex	3	10	11	16	16	16	14	25	32	32
F5 Simple	8	1	3	6	9	3	10	13	7	9
F5 Total	11	11	14	22	25	19	24	38	39	41

complex. Thus when an adverbial element is fixed before the subject, between the subject and verb, or within the verb, it will most likely be a single-word adverbial rather than any complex adverbial construction, such as a prepositional phrase, or adverbial clause. Fixed adverbial elements tend to be placed following an object or complement. We notice a heavy use of F4's and F5's, both simple and complex. However, the F4's and F5's are both more frequently complex than simple. The number of simple F4's, for example, is approximately one-half or one-third that of complex F4's. Similarly with F5's the simple single-word adverbial structure in this position is more rarely used than the complex construction. Again we notice that the increase in the use of complex F4's and F5's from grade two to grade six is strikingly heavy.

The varieties of the F4 are shown in Table 45. The F4 is the most commonly used variety of adverbial element. Therefore a closer look at the distribution of F4's is perhaps worthwhile at this time. As was noted before, the F4 consisting of a single word is relatively a small portion of all F4's. Note, for example, that the use of the prepositional phrase in this position is somewhat greater than that of the single-word F4. It is interesting that the adverbial clause fixed in this position is quite rare. There are none in grade two and only six in grade six. Apparently then, adverbial clauses are really movable and only rarely do they seem to be fixed in a position following the verb in the clause in which they are nested. From Table 45 it can be seen that all varieties of complex F4's are relatively infrequent in comparison with the prepositional phrase and the single-word F4. Thus, we see that adverbial clauses, noun-headed constructions, verbal phrases, prepositional phrases plus modifiers, and adjective-headed or adverb-headed constructions or the adverb plus a prepositional phrase are all used only rarely at all grade levels.

What is true of F4's, that most of them are single words or prepositional

Table 45 TYPES AND TOTALS OF CONSTITUENT FILLERS FOR F4 APPEARING AT LEVEL II ACCORDING TO GRADE LEVELS

	Grade Levels									
Type of F4	21	22	31	32	41	42	51	52	61	62
Frequency:										
Total F4's	34	27	72	39	95	93	154	110	117	120
Simple F4's	12	10	21	9	26	36	46	27	34	35
Complex F4's	22	17	51	30	69	57	108	83	83	85
Type of Complexity										
Clause	0	0	3	0	1	3	6	4	3	3
Noun-headed	2	0	0	0	2	2	3	1	2	5
Prep. Phrase	13	14	33	25	50	37	71	52	53	63
Prep. Phrase + Mod.	2	1	7	0	7	7	8	6	11	4
Verbal Phrase	1	1	0	1	0	5	6	4	3	0
Adj.-headed	1	0	0	0	0	0	0	0	0	0
Adverb-headed	2	1	4	2	7	2	5	5	3	4
Adv. + Prep. Phrase	2	0	4	2	2	1	9	11	8	6

Table 46 TYPES AND TOTALS OF CONSTITUENT FILLERS FOR F5 APPEARING AT LEVEL II ACCORDING TO GRADE LEVELS

	Grade Levels									
Type of F5	21	22	31	32	41	42	51	52	61	62
Frequency:										
Total F5's	11	11	14	22	25	19	24	38	39	41
Simple F5's	8	1	3	6	9	3	10	13	7	9
Complex F5's	3	10	11	16	16	16	14	25	32	32
Type of Complexity:										
Clause	0	1	1	2	2	3	1	3	1	2
Noun-headed	0	0	0	0	0	1	0	1	2	2
Prep. Phrase	3	9	9	13	11	8	9	14	22	22
Prep. Phrase + X	0	0	0	1	2	1	3	4	7	1
Verbal Phrase	0	0	0	0	0	1	0	0	0	1
Adj.-headed	0	0	0	0	0	0	1	0	0	0
Adverb-headed	0	0	1	0	1	1	0	3	0	2
Adv. + Prep. Phrase	0	0	0	0	0	1	0	0	0	2

phrases, is also true of F5's. We find, for example, with any group at any grade level, that other varieties of F5's are used only rarely.

In summary, it should be noted that when adverbials are placed at the beginning of a clause, they are virtually always movable to other positions within that clause. On the other hand, adverbials placed later in the clause—especially following the verb—are often fixed in that position and cannot be easily moved to other positions in the clause. Thus we find that F1, F2, and F3, fixed elements in the earlier positions in the clause, are rare, whereas M1, M2, M3, M4, and M5 all appear; movable elements thus may appear in any position in the clause, although we almost always find them at the beginning or at the end of the clause. When adverbial elements do appear in the middle of the clause, between the subject and the verb, between the verb and object or complement, or within the verb, they are generally movable. For most varieties of the adverbials M or F, the most commonly used are the single-word or prepositional phrase, although for the M1, M4, and M5 there is an increased use of adverbial clauses from the lower grades to the upper.

CHAPTER IV

GENERAL CONCLUSIONS AND IMPLICATIONS

This descriptive study involved the analysis of compositions written by ten groups of children in the second through the sixth grades during a two-year period. The 1000 compositions were written after the children had viewed a short film. A random selection of the sentences was analyzed by AN INSTRUMENT FOR THE SYNTACTIC ANALYSIS OF CHILDREN'S COMPOSITIONS (Revised June 15, 1965). This method of analysis made it possible to select syntactic units for study, to identify the sentence patterns, to enumerate the levels of structure produced, and to determine the nature of the constituents of movable and fixed slots.

I. SUMMARY

The findings of this study cannot be applied beyond the sample population involved. In a number of cases these results reinforced the findings of other investigators and testify to the usability of the INSTRUMENT designed for this study. The questions with which this research study was concerned are answered as follows:

1. What are the trends in the number of syntactic units written in the elementary school, grades 2-6?

In general, pupils tended to write longer stories with each succeeding year spent in school. Fourth-grade pupils wrote more than twice as many syntactic units as second-grade pupils, and sixth-grade pupils three times as many. A total of 15,673 units was written in the 1000 compositions during both years of the study; and 3,133 of these were analyzed, according to the scheme designed for the study, to determine the syntactic structure.

The increase in the total number of syntactic units produced by the same pupils from one year to the next showed a definite increase from grade two to grade three and three to four, a tapering off between grades four and five and a very small increase from grades five to six. The greatest increase in number of units produced by this classification was from 31 to 42 while the 21 to 32 group had the largest percentage of increase. Each subgroup for the first and second year of the study at each grade level maintained its comparative position with regard to the number of units produced when compared with another subgroup at the same grade level. For example, the 21 group produced fewer units in comparison with the 22 group. The next year, when the 21 group became the 32 group, it produced fewer units than its corresponding 31 group. This 31 group produced more units than the 32, as just mentioned, and when this group became the 42 group it, in turn, produced more units than its corresponding 41 group.

2. What levels of structure do children use in their writing?

The frequency of use of the various syntactic structures varied from grade to grade and by the pupils within each grade. At each grade level the pupils wrote multi-level units of communication containing embedded structures of at least six levels. Individual pupils wrote units containing as many as ten levels of structure. Level I is the description of fixed slots and movable elements which serve as complete subjects, verbs, objects, complements, and other fixed and movable structures. Level II is a description of the individual grammatical items which serve as fillers whenever the slot of Level I consists of more than a single element. It is necessary to have more than two levels of analysis when syntactic structures consisting of phrases and clauses are nested within one another. These additional levels are identified as Levels III, IV, etc.

The pupils within this study at all grade levels wrote sentences reaching

Level II most frequently, followed in order by sentences of 3 levels and then sentences of only one level. However, the trend is to use fewer sentences with only a single level in the intermediate grades and to increase the use of Level III units. The increased use of sentences with Levels IV, V, and VI is apparent throughout the grade levels studied, although the rate of increase is not identical for all structural levels or at all grades.

3. What patterns of structure appear in the written communication of children?

The pupils in the ten groups of this study wrote communication units having a wide range and diversity of structural or syntactic patterns. Many of these patterns were atypical, indicating that an almost unlimited variety of syntactic patterns was possible. The use of inverted sentences or questions was infrequent in the second, third, or fourth grades. Pupils at all levels used interrogative words and there as sentence openers, predicate adjectives, and the objective complement as well as indirect objects.

Within slots, there was great variety; for example, within the object slot were almost two hundred different varieties, ranging from the single-word noun or pronoun to many varieties of phrases and clauses.

4. Can the common characteristics of the sentence patterns used by children be identified and classified?

The sentences written by the pupils in this study were grouped into twelve basic patterns. A variety of patterns was used by pupils, at all grade levels, who attempted to tell a story in writing. There was a general increase throughout the elementary grades in the use of the inverted sentence, of interrogative words as sentence openers, of there as a sentence opener, of predicate adjectives, and of the objective complement. The proportion of indirect objects is not great at any grade level, but pupils at all levels are able to use this structure.

Of the 3,133 units analyzed in this study all were classified according to twelve basic patterns. The basic patterns did not depend on movables or fixed elements. The pupils of all grade levels, however, created a variety of patterns. They used movables and fixed elements in a variety of ways in relation to the subject, verb, and object slots. Since the analysis and its tabulation of pupil's writing showed a wide distribution of patterns, there was no strong apparent trend in the ability to use the basic patterns or in the choice of sentence patterns.

5. Can any of the elements of written communication providing variety in sentence structure be identified and described?

The 3,133 units written by the pupils in this study in grades 2-6 were arbitrarily grouped into twelve basic syntactic and structural patterns. The variations of the basic patterns are based upon the addition of movables and fixed elements.

The pupils in this study were able to manipulate movable and fixed slots and other elements, thus providing variety within the basic syntactical patterns identified. The movable elements which the pupils used were words, phrases, clauses, or a combination of these. When compared with words in the subject or verb slots, these segments are fully "movable" in relation to the core sentence, to fixed elements, or other movable elements. The movables were identified according to the position they occupied in the sentence. M1, M2, M3, M4, and M5 were those segments which preceded every other word, or occurred between the subject and verb, within the verb slot, after the verb slot, or after an object or complement, respectively. Fixed elements were similarly classified but had the characteristic of being relatively "fixed" or had an obligatory position. The most commonly used movables and fixed elements were M1, M4, M5, F4, and F5.

Although pupils used all types of movables, there was greater use of movables containing complex constituent fillers during the upper elementary grades. There was a trend toward greater variety in types and complexity of movables employed as the pupils progressed in school.

Fixed elements containing constituent fillers which did not appear in the lower elementary grades appeared with greater frequency in the upper elementary grades. As the pupils increased in grade level a greater variety in written structures using fixed elements appeared; however, pupils at all levels were able to use fixed elements in their writing.

II. SYNTHESIS OF OBSERVATIONS

The INSTRUMENT used in this study promises assistance for the person interested in knowing the sentence patterns, slot constituents, and levels of structure which an individual student is producing. The person applying the INSTRUMENT gains much from the process and should be able to make some definite objective comments on the syntactic structures which characterize the writing samples.

The greatest increase in number of syntactic units written by pupils who were in the first year of the study and again in the second year was by the 31 to 42 group. The 21 to 32 group made the largest percentage of increase. Comments during the writing sessions by the pupils to the researcher indicated that third-grade pupils were hampered by lack of skill in handwriting. Apparently the change from manuscript to cursive writing still demanded a conscious awareness of the writing process on the part of the pupil-writer. While there was no marked lack of ability or understanding of how to write, the task was not automatic or completed at a subconscious level. Almost no comments regarding handwriting were made by pupils in grade four, indicating that the attention of the pupil was focused upon other aspects of the writing process at this level.

Pupils write shorter stories and hence fewer units in the primary grades than they do in the intermediate grades. It would seem that as the mechanical skill of handwriting is mastered, the pupil has greater control over his writing and can write more. It is probable that his school and home experiences with reading in the content areas have given him more experiences, ideas, and events upon which to draw when he is composing. Although the rate of increase in the number of units produced decreases in the upper intermediate grades, the syntactic patterns indicate greater complexity through higher levels of structure. Sentences containing movable and fixed elements can be generated by pupils without teacher editing or pupil re-writing. It is apparent that pupils can frequently create structures within structures in the later elementary grades. The total number of units produced is not in itself a reliable criteria of evaluation.

A number of variables exert influence upon the formation of multi-structural levels in communication units. Since pupils do increase in their ability to use multi-levels of structure, some attempt to identify these variables is needed. Variables to consider are age, intelligence, academic achievement, socio-economic level, and educational background of parents.

Another factor to consider is the concept which the pupil is trying to express which may make it possible or impossible to use one structure rather than another. It seems that the conceptual level on which the pupil is functioning, at a given time and in a given situation, encourages or discourages the level of modification or subordination used by the pupil.

It is apparent that a deeper level of modification is needed to explain a relationship of cause or effect or of sequence. If this is the case, an opportunity to discuss orally the factors involved in this relationship might help the pupil to understand the complexity of the concepts involved. It is unlikely that the pupil will be able to write structures showing modification or subordination which he had not understood first on a conceptual level.

In written communication, pupils rely heavily upon several sentence patterns, such as the 1 2 4, 1 2 and 1 2B 5 and the 1 2B 5A. Older pupils used the inverted forms of 1 2 4 and 1 2, but pupils in grades two and three ignored these possibilities. The use of the basic patterns certainly needs not be discouraged; their use is both necessary and desirable; however, pupils can be inductively helped to see that some authors reverse conventional word order, not only to ask questions, but to achieve a style appropriate to a given writing situation. Certainly no effort should be made to encourage pupils to write "different" or "interesting" sentences on the basis of either variety or similarity to basic patterns. Pupils should not attempt to create artificially any distortions, but should be helped, again inductively, to see the possibilities of language and the choice which is available, even if it is not used at that particular time. The sentence form or structure should be subservient to the ideas generated by the sentence.

Although any sentence produced by pupils in grades two to six can be grouped into one of twelve basic patterns, this type of classification might be an oversimplification. The movables and fixed elements which were contained in the related patterns often contained in their own internal constructions prepositional phrases and clauses of several levels. Basic patterns present a limited view of the variety of patterns which pupils are able to use.

We learned much about writing characteristics of groups of pupils at various grade levels which cannot be communicated in a statistical way. We found, for instance, that different sections of a given grade will not necessarily produce similarly constructed sentences. These differences may be produced by the writing situation itself or by unmeasured variables within the groups or the individuals comprising the groups. An examination of the entire compositions written by some pupils reveal that the communication units selected by random may not illustrate the range in sentence patterns which the individual could produce. It may be that since there is such a large variety of syntactic options possible, and since pupils show that they can manipulate a wide variety of these, a random sample is inadequate for this type of data; later portions of this study will explore other techniques requiring the evaluation of every sentence produced by a student. Carefully selected case studies of pupils where background information involving many variables is diligently and painstakingly studied may be extremely useful. An analysis of the entire corpus of sentences produced by a single student may have promise of revealing more than a sampling from a large group if the limits of the range of sentence pattern possibilities is sought. We did not seek this. We sought a 'paradigm' sample.

SELECTED BIBLIOGRAPHY

Braddock, Richard, Richard Lloyd-Jones, and Lowel Schoel, *Research in Written Composition*, The National Council of Teachers of English, Champaign, Illinois, 1965.

Burrows, Alvina, *et al.*, *They All Want to Write*, Englewood Cliffs, New Jersey, 1962.

Douglas, Wallace W., "On Teaching the Process of Writing" and "The Place of Rhetoric in the Preparation of Composition Teachers," *New Directions in Elementary English*, Champaign, Illinois, 1965.

Hunt, Kellogg W., *Differences in Grammatical Structures Written at Three Grade Levels, The Structures to be Analyzed by Transformational Methods*, Cooperative Research Project Number 1998, Florida State University, Tallahassee, Florida, 1964.

Hunting, Robert, "Recent Studies of Writing Frequency," *Research in the Teaching of English*, I (Spring, 1967), pp. 29-40.

Loban, Walter D., *The Language of Elementary School Children*, National Council of Teachers of English, Champaign, Illinois, 1963. *Language Ability: Grades Seven, Eight, and Nine*, Cooperative Research Project Number 1131, The University of California, Berkeley, California, 1964. *Problems in Oral English*, Champaign, Illinois: National Council of Teachers of English, 1966.

McCarthy, Dorothea A., *The Language Development of the Pre-School Child*, Institute of Child Welfare, Monograph Series Number 4, University of Minnesota Press, Minneapolis, 1930.

University of Minnesota, Institute of Child Welfare, *The Minnesota Scale for Paternal Occupations*.

Source Book on English Institutes for Elementary Teachers, The National Council of Teachers of English, Champaign, Illinois, 1965.

Potter, Robert R., "Sentence Structure and Prose Quality: An Exploratory Study," *Research in the Teaching of English*, I (Spring, 1967), pp. 17-28.

Riling, Mildred E., "Oral and Written Language of Children in Grades 4 and 6 Compared with the Language of Their Textbooks," Southeastern State College, Durant, Oklahoma, 1965. (Report to the U. S. Office of Education, Cooperative Research Project Number 2410).

Strickland, Ruth G., *The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children*, Bulletin of the School of Education, Indiana University, Bloomington, Indiana, 1962.

Templin, Mildred C., *Certain Language Skills in Children: Their Development and Interrelationships*, University of Minnesota Press, Minneapolis, 1957.

APPENDIX A

The Instrument for Syntactic Analysis

AN INSTRUMENT FOR THE SYNTACTIC ANALYSIS OF CHILDREN"S COMPOSITIONS

Revised June 15, 1965

Level I

0. Overview of the instrument's structure: two levels

0.1 Level I

0.1.1 Adapted from Strickland, The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children; Bloomington, Indiana, Bulletin of the School of Education, Indiana University, 1962.

0.1.2 Purpose: Level I is a description and identification of fixed slots and movable elements which serve as complete subjects, verbs, objects, complements, and other fixed and movable structures.

0.1.3 Identification of a sentence: Many of the students have not mastered the conventions of English punctuation; therefore the researcher must use a uniform system of division to identify what is to be considered a sentence. Criteria similar to those of Hunt and Loban are used. The punctuation of pupils is followed whenever possible; however, each independent clause is considered a separate sentence. Compound sentences are divided into two or more communication units for the purpose of analysis. Each subordinate clause is joined to the independent clause which seems most closely related to it.

0.1.4 Example of elements considered at Level I:

	Once	my big brother Tom and I	had seen
Level I	movable element	complete subject	complete verb

a goat that wanted to eat everything in the world.

complete object

0.2 Level II

0.2.1 Purpose: Level II is a description and identification of the individual grammatical items which serve as fillers in sentence level slots whenever the slot on Level I consists of more than a single element. It will be necessary to have more than two levels of analysis when syntactic structures consisting of phrases and clauses are nested within one another. These additional levels will be identified as Levels III, IV, etc.

0.2.2 Analysis to indicate further levels of subordination

Example:

	Once	my	big	brother	Tom	and	I	had	seen
Level I	movable element	complete subject						complete verb	
Level II		poss. pron.	adj.	noun	appos.	connective	pron.		

	a	goat	that	wanted	to	eat	everything	in	the	world.
Level I	complete object									
Level II	determiner	head noun	clause							
Level III			subject	verb			object			
Level IV							head pronoun	prep. phr.		
Level V								prep.	determiner	head noun

1.0 Description of items for analysis at Level I, including notational devices and examples.

1.0.0 Notational device: W

Definition: a question word occurring in the initial position in an interrogative sentence.

Examples:

$\underset{W}{\underline{\text{Why}}}$ did the children put beans in their ears?

$\underset{W}{\underline{\text{How}}}$ did the children get the dog on the roof?

1.0.1 Notational device: $\frac{W}{1}$

Definition: A question word which occurs in the initial position in an interrogative sentence and which also functions as subject.

Examples:

$\underset{\frac{W}{1}}{\underline{\text{Who}}}$ tied the cans to the tail of the dog?

$\underset{\frac{W}{1}}{\underline{\text{What}}}$ is the matter here?

1.0.2 Notational device: $\frac{W}{2}$

Definition: The verb or part of verb shifted to the position in front of the subject in an interrogative sentence.

Examples:

$\underset{\frac{W}{2}}{\underline{\text{Is}}}$ John here yet?

$\underset{\frac{W}{2}}{\underline{\text{Did}}}$ John go to play baseball?

1.0.3 Notational device: $\frac{W}{3t}$

Definition: A question word which occurs in the initial position in an interrogative sentence and also functions as the object of the prepositional phrase transform of the indirect object.

Examples: Whom did John send the flowers to?
$\frac{W}{3t}$

Whom did she give the money to?
$\frac{W}{3t}$

1.0.4 Notational device: $\frac{W}{4}$

Definition: A question word which occurs in the initial position in an interrogative sentence and which also functions as direct object.

Example: What do you want?
$\frac{W}{4}$

1.0.5 Notational device: $\frac{W}{5}$

Definition: A question word which occurs in the initial position in an interrogative sentence and which also functions as predicate complement.

Examples: What were the results of the investigation?
$\frac{W}{5}$

Who were the victims of the attack?
$\frac{W}{5}$

1.1 Notational device: 1

Definition: The subject slot of a sentence, the filler of which may be a word, a phrase, a clause, or a combination of these.

Examples: $\underline{\text{John}}_{1}$ shot my dog.

$\underline{\text{John}}_{1}$ is a very good boy.

$\underline{\text{Mr. Brown and Mr. Jones}}_{1}$ live near me.

$\underline{\text{That this dog could sing}}_{1}$ was an unusual fact.

$\underset{1}{\underline{\text{Mr. Brown, who delivers mail on our block}}}$, is kind to children.

$\underset{1}{\underline{\text{My boy Max}}}$ is a mouse too.

$\underset{1}{\underline{\text{You}}}$ tell him to stop that.

1.1.1 Notational device: (1)

Definition: The standard absence of the subject slot is the imperative sentence. (Should a filler for the subject slot be present in an imperative sentence, 1 would be used to mark it, as in the last example above.)

Example: $\underset{(1)}{\underline{\hspace{3em}}}$ Help me to do this.

1.1.2 Notational device: 1n

Definition: In discontinuous subjects, the part of the subject which contains the nucleus (or headword).

Examples: $\underset{1n}{\underline{\text{They}}}$ were $\underset{1}{\underline{\text{all}}}$ going home.

$\underset{1n}{\underline{\text{We}}}$ were $\underset{1}{\underline{\text{both}}}$ very happy.

1.1.3 Notational device: T-1

Definition: Subject position filled by expletive "there."

Examples: Once $\underset{T-1}{\underline{\text{there}}}$ were three dogs.

Actually $\underset{T-1}{\underline{\text{there}}}$ was no choice in the matter.

1.1.4 Notational device: I-1

Definition: Subject position filled by expletive "it."

Examples: $\underset{I-1}{\underline{\text{It}}}$ was nice that she offered to help.

1.1.5 Notational device: 1b4

Definition: The "by" prepositional phrase which, in a passive transform, expresses the subject of the sentence in the active voice.

Examples: My dog was shot $\underset{1b4}{\underline{\text{by John}}}$.

This house was haunted $\underset{1b4}{\underline{\text{by an old man's death}}}$.

1.1.6 Notational device: x

Definition: The omission of an obligatory slot or filler. This does not include the (1) in an imperative sentence. This symbol combines with other symbols.

Examples: (Note: additional examples will appear on Level II).

$\underset{\frac{x}{1}}{\underline{\qquad\qquad}}$ Never did like the boy.

And about fifty times $\underset{\frac{x}{1}\qquad\frac{x}{2}}{\underline{\qquad\qquad\quad}}$ to my mom and dad that I

wish he was my brother.

But they are both O K, so the boy threw $\underset{\frac{x}{4}}{\underline{\qquad\quad}}$ away.

John came $\underset{\frac{x}{+}}{\underline{\qquad\quad}}$ went again without saying anything.

1.2.0 Notational device: 2

Definition: The verb slot of a sentence, the filler of which may be a single-word verb, a verb phrase, or a compound verb. The slot may be discontinuous.

Examples: John $\underset{2}{\underline{\text{thinks}}}$ I am right.

John $\underset{2}{\underline{\text{will play}}}$ baseball next Saturday.

John $\underset{2}{\underline{\text{left}}}$ $\underset{+}{\text{and}}$ $\underset{2}{\underline{\text{returned}}}$ later.

John $\underset{2}{\underline{\text{ought to try to stop smoking}}}$ cigarettes.

John $\underset{2}{\underline{\text{doesn't want to have to keep on helping}}}$ his mother.

John $\underset{2}{\underline{\text{wanted to play}}}$ baseball.

John $\underset{2}{\underline{\text{went to play}}}$ baseball.

1.2.1 Notational device: 2n

Definition: In discontinuous verb phrases, the part of the phrase which contains the nucleus (or headword).

Examples: The coach $\underset{2}{\underline{\text{has}}}$ already $\underset{2n}{\underline{\text{awarded}}}$ the letters.

We $\underset{2}{\underline{\text{ought to try}}}$ hard $\underset{2n}{\underline{\text{to formulate}}}$ a good system.

He $\underset{2}{\underline{\text{must}}}$ always $\underset{2n}{\underline{\text{keep on turning}}}$ the lights $\underset{(2)}{\underline{\text{out}}}$.

1.2.2 Notational device: (2)

Definition: A word which is not of the verb form-class but which provides a structurally and semantically necessary completion of a verbation. Its distinctive feature is movability to either of two positions: immediately following the verb or after the complement. (However, if the complement is a personal pronoun, the word *must* follow the complement.) The structural necessity may be a feature of the standard language or may be dialectal.

Examples: John $\underset{2}{\underline{\text{took}}}$ the trash $\underset{(2)}{\underline{\text{out}}}$.

He $\underset{2}{\underline{\text{blew}}}\ \underset{(2)}{\underline{\text{up}}}$ the ship.

I'll $\underset{2}{\underline{\text{phone}}}$ you $\underset{(2)}{\underline{\text{up}}}$ when I get home.

1.2.3 Notational device: -2-

Definition: A word which is not of the verb form-class but which provides a structurally and semantically necessary completion of a verbation. It always follows the verb immediately and, if omitted, would either change the meaning of the sentence or render the sentence meaningless. The structural necessity may be a feature of the standard language or may be dialectal.

Examples: One of my brothers is going $\underset{-2-}{\underline{\text{on}}}$ six.

He came $\underset{-2-}{\underline{\text{across}}}$ the facts.

This story took $\underset{-2-}{\underline{\text{place}}}$ in 1491.

1.2.4 Notational device: 2b

Definition: The equational or copulative verb.

Examples: The results of the study $\underset{\text{2b}}{\underline{\text{were}}}$ satisfactory.

He $\underset{\text{2b}}{\underline{\text{became}}}$ president of his class.

You $\underset{\text{2b}}{\underline{\text{look}}}$ sleepy.

They $\underset{\text{2b}}{\underline{\text{seem}}}$ frightened of something.

1.2.5 Notational device: 2bn

Definition: In discontinuous equational or copulative verb phrases, the part of the phrase which contains the headword.

Example: He $\underset{\text{2}}{\underline{\text{had}}}$ always $\underset{\text{2bn}}{\underline{\text{been}}}$ good.

1.2.6 Notational device: 2p

Definition: The verb in the passive voice.

Examples: My dog $\underset{\text{2p}}{\underline{\text{was shot}}}$ by John.

The game $\underset{\text{2p}}{\underline{\text{was played}}}$ last Saturday.

1.2.7 Notational device: 2pb

Definition: A verb in the passive voice which takes a predicate complement.

Example: He $\underset{\text{2pb}}{\underline{\text{was made}}}$ president of his class.

1.3.0 Notational device: 3

Definition: The indirect object slot of the sentence, the filler of which may be a word, a phrase, a clause, or a combination of these.

Examples: Coach Jones is teaching $\underset{\text{3}}{\underline{\text{John}}}$ the fundamentals of the game.

Coach Jones is teaching $\underset{\text{3}}{\underline{\text{the team}}}$ the fundamentals of the game.

Coach Jones will teach whoever tries out for the team the
3

the fundamentals of the game.

Coach Jones will teach the boys who try out for the team
3

the fundamentals of the game.

1.3.1 Notational device: 3t

Definition: The to-prepositional phrase transform of 1.3.

Example: Coach Jones is teaching the fundamentals of the game

to John.
3t

1.4 Notational device: 4

Definition: The direct object slot of a sentence, the filler of which may be a word, a phrase, a clause, or a combination of these.

Examples: John spends money.
4

John spends what his mother gives him.
4

John spends the allowance his mother gives him.
4

1.4.1 Notational device: 4n

Definition: In discontinuous objects, the part of the object which contains the nucleus.

Example: And what do you think he saw?
4 4n

1.5.0 Notational device: 5

Definition: The complement slot for an equational or copulative verb, the filler of which is substantive in nature and which may be a word, phrase, clause, or combination of these.

Examples: John is the boy next door.
5

That book is what I want.
5

John seems a boy who enjoys life.
5

John was elected president of his class.
5

1.5.1 Notational device: 5a

Definition: The complement slot for an equational or copulative verb, the filler of which is adjectival in nature and which may be a word, phrase or combination of these.

Examples: John is cheerful.
5a

The milk turned sour.
5a

The work proved exhausting to the children.
5a

1.6.0 Notational device: 6

Definition: The objective complement slot, the filler of which is substantive in nature and which may be a word, phrase, clause, or combination of these.

Examples: They elected John president of his class.
6

You made me what I am today.
6

They thought him a man who spoke hastily.
6

1.6.1 Notational device: 6a

Definition: The objective complement slot, the filler of which is adjectival in nature and which may be a word, phrase or combination.

Examples: They painted the house red.
6a

They declared him unfit for office.
6a

The board ruled the activity too exhausing for the children
6a (and following line)

to engage in.

1.7.0 Notational device: M

Definition: Those syntactic segments which do not fit into the slots already named and which by comparison with these slots are freely "movable," i. e., have greater degrees of freedom of order and placement. Note: this group does not include the movable verb particle (see section 1.2.2). Movability will be determined according to apparent freedom of movement, either in respect to the core sentence or in relation to fixed elements or other movable elements. The filler may be a word, phrase, clause, or combination of these. This is a group designation by position subdivided as follows:

1.7.1 Notational device: M_1

Definition: A movable which precedes everything else in the sentence. This position may be filled by more than one movable.

Examples: $\underset{M_1}{\underline{\text{Soon}}}$ the little boy will be down to breakfast.

$\underset{M_1}{\underline{\text{On the way}}}$ John met his friend.

$\underset{M_1}{\underline{\text{From where he stood}}}$ John could not see the speaker.

$\underset{M_1}{\underline{\text{Happy to be going}}}$, John packed his suitcase.

$\underset{M_1}{\underline{\text{Speeding down the highway}}}$, John began to get sleepy.

$\underset{M_1}{\underline{\text{When he got the flower in his mouth}}}$, the bee stung him right in his mouth.

$\underset{M_1}{\underline{\text{Then}}}$ $\underset{M_1}{\underline{\text{with a fanfair}}}$ the ceremony began.

1.7.2 Notational device: M2

Definition: A movable which occurs between the subject and verb slots, or between the expletive and verb slots.

Examples: She $\underset{\text{M2}}{\underline{\text{never}}}$ was bad.

John, $\underset{\text{M2}}{\underline{\text{on the way}}}$, met his friend.

John, $\underset{\text{M2}}{\underline{\text{from where he stood}}}$, could not see the speaker.

John, $\underset{\text{M2}}{\underline{\text{happy to be going}}}$, packed his suitcase.

John, $\underset{\text{M2}}{\underline{\text{speeding down the highway}}}$, began to get sleepy.

There $\underset{\text{M2}}{\underline{\text{once}}}$ was a tiger who lived in a cave.

There $\underset{\text{M2}}{\underline{\text{once}}}$ was a bird that was tired of sitting on her egg.

It $\underset{\text{M2}}{\underline{\text{usually}}}$ is a good idea to look before you leap.

1.7.3 Notational device: M3

Definition: A movable which occurs within the verb slot.

Examples: The little boy will $\underset{\text{M3}}{\underline{\text{soon}}}$ be down to breakfast.

John did $\underset{\text{M3}}{\underline{\text{on the way}}}$ meet his friend.

John could not, $\underset{\text{M3}}{\underline{\text{from where he stood}}}$, see the speaker.

1.7.4 Notational device: M4

Definition: A movable which occurs after the verb slot. It may be followed by an object or complement. This position may be filled by more than one movable.

Examples: There was $\underset{\text{M4}}{\underline{\text{once}}}$ a horse who talked.

Then a fox came $\underset{\text{M4}}{\underline{\text{out of the forest}}}$ $\underset{\text{M4}}{\underline{\text{looking mad}}}$.

The farmer had $\underset{\text{M4}}{\underline{\text{only}}}$ his three horses.

He worked $\underset{\text{M4}}{\underline{\text{every day}}}$ $\underset{\text{M4}}{\underline{\text{hauling logs}}}$ $\underset{\text{M4}}{\underline{\text{until five o'clock}}}$.

The man came $\underset{\text{M4}}{\underline{\text{out}}}$ $\underset{\text{M4}}{\underline{\text{bouncing}}}$ $\underset{\text{M4}}{\underline{\text{with suds coming out of his ears}}}$.

It was $\underset{\text{M4}}{\underline{\text{for us}}}$ a very difficult decision.

She left $\underset{\text{M4}}{\underline{\text{right after the game}}}$.

1.7.5 Notational device: M5

Definition: A movable which occurs after an object, a complement slot, or a fixed slot following the verb. This position may be filled by more than one movable.

Examples: John met his friend on the way.
M5

He got an A on his paper.
M5

So Billy was nice then.
M5

They called him a pig because he was always dirty.
M5

So they went home sadly.
M5

They never went to the city again.
M5

Timothy went on a vacation with his family.
M5

1.8.0 Notational device: F

Definition: Those syntactic segments which do not fit into the slots already named, but are relatively "fixed," or not easily "movable"; i. e., their placement within the sentence appears to be obligatory. The filler may be a word, phrase, clause, or any combination of these. This is a group designation subdivided as follows:

1.8.1 Notational device: F1

Definition: A fixed segment which comes first in the sentence.

Examples: When Henry didn't have to go to school, he said that
F1

he would play a trick on his mother.

After the barber cut my hair, he gave me some candy.
F1

Never do that again.
F1

So was the other one, too.
F1

A few feet away was a little bettle.
F1

1.8.2 Notational device: F2

Definition: A fixed segment which comes between the subject and the verb in a sentence.

Examples: He $\underset{\text{F2}}{\underline{\text{never}}}$ goes out with girls.

The princess $\underset{\text{F2}}{\underline{\text{never}}}$ knew it.

My grandfather $\underset{\text{F2}}{\underline{\text{almost}}}$ caught a Northern Pike.

One day he $\underset{\text{F2}}{\underline{\text{really}}}$ got into trouble.

It $\underset{\text{F2}}{\underline{\text{just}}}$ seemed that he could never keep out of trouble.

1.8.3 Notational device: F3

Definition: A fixed segment which occurs within the verb slot.

Example: I might $\underset{\text{F3}}{\underline{\text{as well}}}$ go.

1.8.4 Notational device: F4

Definition: A fixed segment which follows the verb. This position may be filled by more than one fixed element.

Examples: Then he came $\underset{\text{F4}}{\underline{\text{to a house that was being built}}}$.

The bees were buzzing $\underset{\text{F4}}{\underline{\text{around}}}$.

He never goes $\underset{\text{F4}}{\underline{\text{out}}}$ $\underset{\text{F4}}{\underline{\text{with girls}}}$.

They lived $\underset{\text{F4}}{\underline{\text{happily}}}$ $\underset{\text{F4}}{\underline{\text{ever after}}}$.

1.8.5 Notational device: F5

Definition: A fixed segment which follows an object or complement. This position may be filled by more than one fixed element.

Examples: She put it $\underset{\text{F5}}{\underline{\text{in the trunk of the car}}}$.

He got ready $\underset{\text{F5}}{\underline{\text{for Christmas}}}$.

My mother kept me $\underset{\text{F5}}{\underline{\text{home}}}$.

They took it $\underset{\text{F5}}{\underline{\text{home}}}$ $\underset{\text{F5}}{\underline{\text{to have it for dinner}}}$.

She left it $\underset{\text{F5}}{\underline{\text{where she couldn't find it}}}$.

1.9 Notational device: V

Definition: A segment which selects constructions traditionally described as "direct address."

Example: Give me the book, $\underset{\text{V}}{\underline{\text{John}}}$.

1.10 Notational device: Y

Definition: A segment which selects such absolute elements as interjections and exclamations which do not occur as separate utterances.

Examples: $\underset{\text{Y}}{\underline{\text{Why}}}$ this is the lost baby.

$\underset{\text{Y}}{\underline{\text{Well}}}$ he tried to stop him but he couldn't.

1.11 Notational device: Z

Definition: A segment which selects words, phrases, clauses, or combinations which are parenthetical.

Examples: It was, $\underset{\text{Z}}{\underline{\text{of course}}}$, an excellent idea.

It was, $\underset{\text{Z}}{\underline{\text{I thought}}}$, an excellent idea.

1.12.0 Relating words and phrases

1.12.1 Notational device: +

Definition: A coordinator used to connect elements within a sentence or utterance.

Examples: He always kicks $\underset{+}{\underline{\text{or}}}$ screams when I try to give him a bath.

I neither can nor shall tolerate that.
+ +

1.12.2 Notational device: -

Definition: A symbol to mark the linking of items in a structure of coordination which are not joined by a coordinator.

Example: The children played, sang, and danced.
-

1.12.3 Notational device: &

Definition: A sequence marker between independent structures or utterances.

Examples: Both knights were mounted and each held a lance.
&

And she could dance.
&

But one day this dog died.
&

And so they had to find another dog.
&

So the cat was in show business.
&

1.13 Notational device: U

Definition: A short utterance--one or more words, structured if multiword, lower than sentence level--conveying meaning and usually marked by 3 1 intonation contour.

Examples: Will you do it?--All right.
U

He swallowed the torpedoes. A job well done.
U

1.14 Notational device: [ ]

Definition: An element of any length which is extrastructural in the sentence and usually unstructured in itself. It expresses a maze, hesitation, false start, primer, or onomatopoeia.

Example: [Our uh] our dog [well he] got away.

1.15 Notational device: ^

Definition: A symbol to indicate a syntactic completion between independent structures or utterances when the student has not indicated the completion with a sequence marker or an end-mark of punctuation.

Examples: One day Tommy was going to his grandpa's ∧

his grandpa lived across the sea.

Once I went on a Boat ride ∧ We went in side to eat our

breakfast.

1.16 Notational device: "

Definition: A symbol used in pairs to indicate the enclosure of a direct quotation. When the tag phrase, i. e., he said, is a simple 1 2 pattern as such, the tag phrase is not analyzed. If, however, the tag is more complex than the simple 1 2 pattern, it will be analyzed on Level I and the quoted segment will be a /4 on Level I and will be analyzed at higher levels. (See 3.0.4 and 3.0.5.)

Examples: He said, "Henry, brush your teeth."
" "

The innkeeper would say, "No, sorry, no room available."
" "

One day Mr. White said, "We just have to get rid of that
"

horse."
"

And then a little duck said, "I know where the sea is."
" "

AN INSTRUMENT FOR THE SYNTACTICAL ANALYSIS OF CHILDREN'S COMPOSITIONS---THE EVERTTS STUDY

Level II

2.0 Description of the Level II analysis

Subject and complement slots, M's and F's where applicable, as in structures of predication or structures of complementation, use whatever Level I symbols are appropriate. The following additional symbols may also be used. All of the items apply on the third, fourth, and all additional levels beyond the second, as well as to Level II.

2.1 Notational device: d

Definition: a noun indicator or determiner, specifically articles and demonstrative or quantitative adjectives. This grammatical item appears at the beginning of a nominal slot. Note: although frequently classified as determiners. the possessive pronouns will be identified by another symbol in this study.

Examples: The blue dress looks very nice.
I 1
II d

Do you have any money?
I 4
II d

This book is overdue.
I 1
II d

You should have some ideas.
I 4
II d

2.2 Notational device: pd

Definition: a predeterminer. This group is limited to a few words which in a nominal slot can precede the determiner without any intervening elements.

Examples: All the new dresses have been sold.
I 1
II pd d

She has lost both the German books.
I 4
II pd d

Many a person must make that decision.
I 1
II pd d

```
     Such a fine talent should not be wasted.
  I         1
  II  pd  d
```

2.3 Notational device: Aj

Definition: an adjective within a slot.

```
Examples:  Have you seen the new car?
  I                          4
  II                      d  Aj

     The little old German family doctor is here.
  I                 1
  II  d     Aj    Aj   Aj

     The tall, strange-looking character is my cousin.
  I  .                1
  II  d    Aj         Aj

     Would you do that to little old me?
  I                          M5
  II                        Aj    Aj

     Her new dress was bright blue.
  I                         5a
  II                            Aj
```

2.4 Notational device: H

Definition: the head of a structure of modification. This symbol will always be used in combination with another symbol; e. g., HN, HAj, HAv, HP, HInf, Hing, Hed.

```
Example:  The old coat was a big problem.
  I            1               5
  II       d  Aj   HN      d  Aj    HN
```

Note: other examples will appear as the other symbols are explained.

2.5 Notational device: N

Definition: a noun within a slot.

```
Examples:  The governor and the senator became very unpopular.
  I                       1
  II        d     HN         d     HN

     Have you seen the white dog?
  I                       4
  II                d  Aj     HN
```

Take the old blue book.
I 4
II d Aj Aj HN

Little Charlie is here.
I 1
II Aj HN

A Mr. Walter Smith called while you were out.
I 1
II d HN

2.6 Notational device: At

Definition: an attributive noun(or noun adjunct) within a slot, a noun which functions as an adjective and is in the attributive position immediately before the noun modified.

Examples: The dog house needs a coat of paint.
I 1
II d At HN

I missed the school bus.
I 4
II d At HN

The bus driver was upset.
I 1
II d At HN

Is that a Nebraska State Highway Patrol car?
I 5
II d At At At At HN

Can I have a chocolate nut fudge ice cream cone?
I 4
II d At At At At At HN

2.7 Notational device: N's

Definition: a noun in the possessive case within a slot. Note: if the possessive noun is the only member of a slot, it will be identified by the appropriate number on Level I, and no further identification will be given.

Examples: John's coat is missing.
I 1
II N's HN

You forgot the boy's birthday.
I 4
II d N's HN

```
   Bill's attitude is terrible.
I         1
II  N's      HN

   Have you seen the doctor's hat?
I                     4
II                Ld  N's      HN
```

2.8 Notational device: Ap

Definition: an appositive within a slot.

Examples:

```
   Tom's dog Rex is missing.
I          1
II  N's HN  Ap

   The new chairman, Dr. Smith, was missing.
I             1
II  d   Aj   HN          Ap

   The book, Oblomov, is very interesting.
I         1
II  d   HN     Ap

   Milton, the author of Samson Agonistes, could understand
I                1
II   HN   Ap______________________________

   the blind hero's feelings.
```

2.9 Notational device: Pn

Definition: a pronoun within a slot. In this study it is distinguished from a noun in that it cannot have an indicator or determiner preceding it.

Examples:

```
    He and I are equally responsible.
I       1
II  Pn    Pn

   She cheated almost everyone.
I                   4
II                     HPn

   All these are rare.
I      1
II  d   HPn

   I will choose him whom I can trust.
I                        4
II               Pn
```

2.10 Notational device: Pn's

Definition: a possessive pronoun, either personal, quantitative, or reciprocal within a slot.

Examples: My new coat was torn.
I   1
II   Pn's Aj HN

She is everyone's friend.
I   5
II   Pn's   HN

They solve one another's problems.
I
II   Pn's   HN

They have sealed our fate.
I   4
II   Pn's HN

2.11 Notational device: Av

Definition: an adverbial element within a slot.

Examples: He does his work very carefully.
I   M5
II   Av   HAv

We met the very tall stranger.
I   4
II   d   Av   Aj   HN

He did exceptionally well on the test.
I   F4
II   Av   HAv

Almost everyone was here.
I   1
II Av   HPn

2.12 Notational device: P

Definition: a prepositional phrase within a slot. Note: if the prepositional phrase is a complete nominal slot, M, or F on Level I, it will be identified as M, F, etc. Then on Level II the constituents of the phrase will be identified, and this symbol will not appear.

Examples: The boy on the bicycle is my brother.
I   1
II   d   HN P___________

We left just before the buzzer.
I   M4
II   Av HP_____________

```
   I must replace the tires on my car.
I                         4
II                  d    HN  P_________

   The book is right on top of the television set.
I                           F4
II             Av    HP____________________________
```

2.13 Notational device: (P)

Definition: the word or group of words which function as the preposition itself in an analysis of the whole phrase.

Examples:

```
    Under the tree is shady.
I          1
II  (P)    d   HN

   It is peaceful down the road.
I                      M5
II                (P)   d  HN

   According to Jones this problem can't be solved.
I         M1
II    (P)        HN

   We must all suffer because of her decision.
I                              M4
II                      (P)    Pn's     HN

   The chair in the corner should be repaired.
I             1
II  d    HN  P____________
III         (P)  d    HN

   She put it in the trunk of the car.
I                      F5
II           (P)  d    HN   P_________
III                        (P)  d   HN
```

2.14 Notational device: C

Definition: A clause within a slot. Note: the symbol C will not appear when a clause completely fills a nominal slot or is an M or F. It will be identified as M, F, 1, 3, 4, 5, or 6 on Level I and the constituents of the clause will be identified on Level II by the appropriate symbols.

Examples:

```
    The boys who broke the windows should be punished.
I                  1
II   d   HN  C_____________________
```

She had the book that I wanted.
I 4
II d HN C

On the morning after I got there I lost my money.
I M1
II(P) d HN C

2.15 Notational device: ≠

Definition: a subordinating connective, either single-word or phrase, used to introduce clauses, verbal phrases, and occasionally adjectives and adjective phrases.

Examples: If she doesn't come, phone her.
I M1
II ≠

Punish her so that she won't do it again.
I M5
II ≠

Tell me when she gets here.
I 4
II ≠

Because I could not stop for death, he kindly stopped for me.
I M1
II ≠

He couldn't win, no matter how he tried.
I M4
II ≠

I didn't know how to do it.
I 4
II ≠

Although defeated, the team was still encouraged.
I M1
II ≠

2.16 Notational device: ing

Definition: a present participial phrase used as a constituent of a structure of modification. Note: equivalent forms filling nominal slots are identified as 1's, 4's, etc. If a participial phrase is shifted from its normal appositive position, it will be identified by the proper M on Level I.

```
Examples:  The boys swimming in the river should be careful.
      I                  1
      II   d   HN  ing_______________

           Do you know the girl washing the car?
      I                        4
      II                 d   HN  ing__________

           After taking my money, he took my car.
      I             Ml
      II  ≠   ing__________

           The book sitting on the desk is very good.
      I                   1
      II  d   HN  ing_____________
```

2.17 Notational device: (ing)

Definition: the single-word present participle itself.

```
Examples:  Swimming in the river can be dangerous.
      I               1
      II  H(ing)     P__________

           The girls washing the car are doing a good job.
      I              1
      II  d   HN    ing____________
      III          (ing)     4

           Her job is making pizza.
      I                      5
      II                  (ing)   4

           While driving my car, he had an accident.
      I                  Ml
      II  ≠    ing____________
      III     (ing)     4

           The swimming team did very well.
      I              1
      II  d   (ing)     HN
```

2.18 Notational device: ed

Definition: a past participial phrase used as a modifier in a structure of modification. Note: if the phrase is moved from its normal position following the word modified, it is identified by the proper M on Level I.

```
Examples:  The vase broken by the children cannot be replaced.
      I                      1
      II   d   HN  ed________________
```

```
   The man wanted by the police was here last week.
I                    1
II  d   HN ed__________________

   The candidate defeated in the primary was our choice.
I                     1
II  d    HN       ed_____________________

   We chose the girl dressed in white.
I                      4
II           d   HN  ed______________
```

2.19 Notational device: (ed)

Definition: the single word present participle in a slot.

Examples:

```
    The town attacked by the guerillas could not be defended.
I                  1
II   d   HN   ed________________________
III           (ed)    1b4_______________

   The candidate chosen in the election was not my choice.
I                    1
II  d      HN     ed______________________
III              (ed)        ______P_______

   The house painted red is ours.
I              1
II  d    HN  ed___________
III         (ed)      5a

  We want to buy the car parked in the driveway.
I                             4
II                   d  HN  ed____________________
III                        (ed)        _____P_____

  The defeated candidate should have won.
I            1
II  d   (ed)        HN

  She hit a parked car.
I              4
II         d (ed)   HN
```

2.20 Notational device: Inf

Definition: an infinitive phrase in a slot. Note: this symbol will not be used if the infinitive phrase constitutes an entire slot since the appropriate symbol for the slot (1, 3, 4, etc.) will be used on Level I, and no further analysis will be needed.

```
Examples:  This is a book to read quickly.
  I                        5
  II              d  HN  Inf

     Mr. Jones is the one to see now.
  I                       5
  II              d  HN  Inf
```

2.21 Notational device: (Inf)

Definition: the infinitive itself in a slot, either with or without the function word "to."

```
Examples:  Make her stop that.
       I               4
       II          1 (Inf)  4

          We wanted him to give us the book.
       I                      4
       II                  1 (inf)    3   4

          It was his idea to bring her along.
       I                             1
       II                      (Inf)    4    F5

          For us to be punished was unfair.
       I                  1
       II   1          (Inf)

          To do the right thing is not always easy.
       I                 1
       II (Inf)          4

          This is a book to read quickly.
       I                     5
       II          d  HN  Inf
                         (Inf)         Av
```

2.22 Notational device: x

Definition: The omission of an obligatory filler. This symbol combines with other symbols.

```
Examples:  He shot __moose.
       I                4
       II          x    HN
                   d
          She ran _____the block.
       I                   F4
       II          x     d   HN
                  (P)

          She gave me   a  big ________.
       I                   4
       II               d   Aj    x
                                  HN
```

3.0 The analyses of sample sentences having more than a single level of structure.

3.0.1 Example:

```
     Then he told Bob,who had been watching all this with a puzzled expression
                  ___________________________________________________________
I     M1   1   2                             3
II                HN  C______________________________________________________
III                   1  _____2___________ ___4____ ______F5_________________
IV                                          Pn HPn  (P)  d  (ed)      HN

    to go to the other end of the tunnel with the crackers and call Sparky.
    ______________________________________________________________________
I                                    4
II  (Inf) __________F4___________________ ______F4___________ + (Inf)    4
III       (P)  d   Aj   HN  P____________ (P)   d     HN
IV                         (P)  d    HN
```

3.0.2 Example:

```
   Sparky, knowing food was at the other end of the tunnel raced through the tunnel
   _______________________________________________________       __________________
I                                  1                        2          F4
II   HN   Ing_____________________________________________         (P)    d    HN
III      (ing)  ___________________4______________________
IV                  1    2  ____________F4________________
V                          (P)  d   Aj   HN  P____________
VI                                          (P)  d    HN

   with a cable dragging behind and received her reward.
   ____________________________              __________
I                 F4             +     2        4
II (P)     d   HN (ing)    Av                Pn's  HN
```

3.0.3 Example:

```
     Now Jack's father told him that the first thing that he should do
I    Ml        1          2   3                  4                    (cont.)
II        N's     HN              ≠ _________________1_________________
III                                   d   Aj    HN   C_________________
IV                                                    ≠   1  ___2______

    was to look for the nest that the baby bird fell from.
I                    4
II   2b  ___________________5______________________________
III     (Inf)   -2- ___________4___________________________
IV                   d  HN   C_____________________________
V                            ≠    ______1_______  2   F4
VI                                 d   At   HN
```

```
     3.0.4  Example:  He said, "Henry brush your teeth."
       I                         1     2       4
       II                                   Pn's   HN
```

```
     3.0.5  Example:  And then a little duck said, "I know where the sea is."
            I          &     Ml     1         2    "          4             "
            II                 d    Aj    HN        1  2   _______4__________
            III                                             ≠  ____1____ 2
            IV                                                    d    HN
```

APPENDIX B

Sample Analyses

Sample A

The Girl and the Teenage boy

```
   There was a vet and his girl named Suesy.
1   T-1  2b              1
2          d  HN  + Pn's HN  ed________
3                            (ed)    5
```

```
   The girl was a Japanese girl.
1    1    2b        5
2  d  HN      d   Aj     HN
```

```
   The father was a American.
1     1     2b      5
2  d    HN     d    HN
```

```
   One day a teenage boy came.
1    Ml         1        2
2  Aj  HN  d   Aj  HN
```

Sample A continued

```
   He had with him a dog that was very sick.
1   1  2      M4                4
2         (P)  HN  d  HN  C________________
3                         1   2b  ____5a___
4                                   Av   Aj
```

```
   The teenage boy came when the vet was gong.
1         1          2            M4
2   d     Aj    HN        ≠  ___1___  2b  5a
3                            d   HN
```

```
   So Suesy let the Teenage
1  &    1    2       4
2                   ___1___  ___x___
                               Inf
3                d     Aj  _X_
                            HN
```

Sample B

```
   In northern Colombia South America a Jaguar was dozing in his favorite thickit
1                   M1                     1         2                 f4
2  (P)    Aj               HN          d    HN              (P)  Pn's  Aj     HN

   when something aroused him.  A bird cawed then others picked it up.
1                 f4                1      2    M1    1      2    4   (2)
2     ≠      1        2     4    d   HN

   Instantly he was up and all sences aleart.  Then he smelled it.  The distastful smell of man.
1       M1   1   2b   5a  &       1    x   5a      M1  1     2     4                u
                                      2b
2                           Aj    HN                                    d      Aj       HN  P____
3                                                                                           (p) HN

   He leaped off into the jungle without a sound.  Soon after he climbed a tree and waited to see
1    1    2    f4        f4              M4              M1     1    2       4     +       2
2                  (P)  d    HN      (P)  d   HN     Av    HAv            d   HN
```

Sample B continued

```
    if the man would pass under.  He did.  And it was a good thing for the man
1                4                  1  2     & I-1  2b            5a
2   ≠ ____1____     2        f4                        d  Aj   HN    P_________
3       d   HN                                                      (P)  d   HN

    that the jaguar wasn't hungry.  A questal bird flew up suddenly.  It passed by the jaguar.
1                 1                        1         2   F4    M5       1    2  -2-      4
2    ≠  _____1_____   2b     5a      d    Aj   HN                                    d    HN
3         d    HN

    The man raised his blowgun and shot.  His shot missed and hit the jaguar, which the Indian hadn't seen.
1     1        2        4       +     2        1       2    +   2                      4
2    d HN          Pn's   HN              Pn's HN                   d    HN     C___________________________
3                                                                                4   _____1_____    2
4                                                                                     d     HN

    Instantly he fell to the earth dead.  A smile spread across the Indian's face.
1      M1     1    2      f4       M5        1       2              f4
2                    (P) d   HN           d   HN          (P)     d   N's     HN
```

Sample B continued

This would surely bring a good price for the Indian to trade to the Mayan merchants.

1 1 2 M3 2n 4 f5

2 d Aj HN ≠ 1 (Inf) f4

3 d HN (P) d Aj HN

The sentence patterns identified by the syntactic analysis as presented in the INSTRUMENT can be tabulated to show the patterns which appear at each level and to show the fillers for the various slots. The following tabulations illustrate the sentence constructions used by the pupils who wrote the two selected stories.

Sample A

Level I Patterns

T1 2b 1

1 2b 5

1 2b 5

M1 1 2

1 2 M4 4

1 2 M4

& 1 2 4

Level II Patterns

1 slots

d N + Pn's N ed

d HN

d HN

d Aj HN

d Aj HN

4 slots

d HN C

1 $\frac{x}{Inf}$

5 slots

d Aj HN

d HN

M1 slot

Aj HN

M4 slot

(P) HN

≠ 1 2b 5a

Level III Patterns

1 slots

d Aj $\frac{x}{HN}$

d HN

C slot

1 2b 5a

ed slot

(ed) 5

Level IV Patterns

5

5a slot

Av HAJ

Sample B

Level I Patterns

M1 1 2 F4 F4

1 2

M1 1 2 4 (2)

M1 1 2b 5a

& 1 $\frac{x}{2b}$ 5a

M1 1 2 4

U

1 2 F4 F4 M4

M1 1 2 4 + 2 4

1 2

& I1 2b 5a 1

1 2 F4 M4

1 2 (2) 4

1 2 4 + 2

1 2 + 2 4

M1 1 2 F4 F4

1 2 F4

1 2 M3 2n 4 F5

Level II Patterns

1 slots

d HN

Aj HN

≠ 1 2 5a

d Aj HN

d HN

Pn's HN

d HN

4 slots

d HN

≠ 1 2 F4

d HN

Pn's HN

d HN C

d Aj HN

5a slot

d Aj HN P

M1 slots

(P) Aj HN

Av HAv

M4 slot

(P) d HN

F4 slots

(P) Pn's Aj HN

≠ 1 2 4

(P) d HN

(P) d HN

(P) d N's HN

F5 slot

≠ 1 (Inf) F4

U slot

d Aj HN P

Level III Patterns

1 slots

d HN

d HN

d HN

P slots

(P) HN

(P) d HN

(P) d Aj HN

C slot

4 1 2

Level IV Pattern

1 slot

d HN

These two sentences selected from the preceding stories show a complete analysis of each sentence and the relationships between the various levels.

Sample A

Sentence Number 5

He had with him a dog that was very sick.

I	1 2 M4 4	(Note that M4 and 4 contain deeper layers of structure which can be analyzed on other levels)
II	$\frac{\text{M4 slot}}{\text{(P) HN}}$	(The fillers of the Level I M4 slot are described on Level II. Each element is described on this level)
	$\frac{\text{4 slot}}{\text{d HN C}}$	(Level II constituents of the 4 slot which appeared in Level I will need to be further analyzed since the C slot, an adjective clause, contains a variety of structures)
III	$\frac{\text{C}}{\text{1 2b 5A}}$	(Level III filler of C slot which appeared in Level II and which in turn was part of the 4 slot in Level I contains a structure which will need to be analyzed on the next level)
IV	$\frac{\text{5A}}{\text{Av HAj}}$	(Level IV filler of 5A slot which appeared in Level III and the 5A slot in Level III is a filler of the C slot. Likewise the C slot in III is a filler for the 4 slot in Level II)
V		(There is no Level V since no element in Level IV is composed of two or more parts)

Sample B

Sentence Number 13

His shot missed and hit the jaguar, which the Indian hadn't seen.

I 1 2 + 2 4

II $\frac{\text{1 slot}}{\text{Pn's HN}}$

$\frac{\text{4 slot}}{\text{d HN C}}$

III $\frac{\text{C}}{\text{4 1 2}}$

IV $\frac{\text{1}}{\text{d HN}}$

APPENDIX C

Schools Participating in the Study

1963-1964
1964-1965

Omaha: Adams

Belle Ryan

Harrison

Mountain View

Lincoln: Calvert

Holmes

Huntington